POLICY RESEARCH WORKING PAPER 1377

Macroeconomic Adjustment to Capital Inflows

Latin American Style versus East Asian Style

Vittorio Corbo
Leonardo Hernández

Tight fiscal policy seems to be the best way to maximize benefits from capital inflows while reducing their side effects (especially appreciation of the real exchange rate). Increasing public saving — viewed favorably by international investors — seems to be the only way to protect the real exchange rate in the long run.

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Summary findings

In recent years, private capital inflows to some developing countries have increased sharply. This increase has provided the financing needed to enhance the use of existing capacity and to raise investment levels.

But capital inflows produce their own problems. They can increase inflation and lead to exchange rate appreciation, for example.

Corbo and Hernández review the macroeconomic repercussions of an increase in capital inflows. Generally, it will result in appreciation of the real exchange rate, a larger nontradable sector, a smaller tradable sector, and a larger trade deficit.

Under a fixed exchange rate regime, it will also result in faster inflation and an accumulation of foreign reserves.

Can government intervention minimize the size and effects of real exchange rate appreciation? Corbo and Hernández discuss different mechanisms that can be used to limit that appreciation — and discuss the difference, in this respect, between portfolio investment and external debt.

Finally, they review and compare the recent experiences of four Latin American countries (Argentina, Chile, Colombia, and Mexico) and five East Asian countries (Indonesia, Malaysia, the Philippines, the Republic of Korea, and Thailand), and discuss how these countries have dealt with the macroeconomic side effects of capital inflows. Among their findings:

- All nine countries have avoided a permanent, significant increase in inflation, it can be argued. In Argentina and Mexico inflation has been decreasing for three or four years, and in the other seven countries it has remained stable.
- The countries that received the largest average capital inflows (as a proportion of GDP) in 1989–92 are *not* those that experienced the greatest exchange rate appreciation. In fact, the countries with the greatest capital inflows (Chile, Malaysia, and Thailand) have experienced either depreciation or low appreciation of their currencies. (Appreciation was lower in Thailand than in Korea despite much greater capital inflows in Thailand.)
- Countries with decreasing government consumption as a percentage of GDP (Chile, Indonesia, and Malaysia) showed less appreciation of the real exchange rate.
- Countries with increasing government consumption as a percentage of GDP (Argentina, Korea, Mexico, and the Philippines) showed the greatest appreciation of the real exchange rate, despite not receiving the greatest capital inflows.

This paper — a product of the International Finance Division, International Economics Department — is part of a larger effort in the department to analyze the consequences for developing countries of the new surge in capital inflows. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Rose Vo, room S8-113, extension 31047 (35 pages). November 1994.

MACROECONOMIC ADJUSTMENT TO CAPITAL INFLOWS: LATIN AMERICAN STYLE VERSUS EAST ASIAN STYLE

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MACROECONOMIC ADJUSTMENT TO CAPITAL INFLOWS: LATIN AMERICAN STYLE VERSUS EAST ASIAN STYLE

Summary

In recent years, capital inflows to some developing countries have increased sharply. These have provided much needed financing to increase the use of existing capacity and to increase investment levels. However, capital inflows can have their own problems as they will result in an increase in domestic expenditures, and therefore, in a real exchange rate appreciation, a larger non-tradable sector, a smaller tradable sector, and ultimately in a larger trade deficit. In addition, in a fixed or preannounced nominal exchange rate regime they will also result in an acceleration of domestic inflation and in an accumulation of foreign reserves.

Governments in developing countries should be concerned about capital inflows because of several reasons. Among those the most important are: first, the increase in the volume of resources being intermediated through the financial system, which can exacerbate moral hazard problems, especially in countries with a weak banks' supervisory system; second, the appreciation of the real exchange rate can put in jeopardy the success of the recently implemented trade liberalization reforms; third, the increase in domestic inflation can erode the credibility of the undergoing price stabilization programs; and fourth, if capital inflows are volatile and of a short-term nature, a reversal of the flows may cause important economic losses associated with the resource reallocation process.

In order to minimize the side effects of capital inflows, governments can intervene by directly restricting the amount of inflows, restraining fiscal policy, liberalizing the current account and the capital account of the balance of payments –in particular capital outflows–, intervening in the exchange market to support the nominal exchange rate, implementing open market operations to curb the increase in domestic liquidity, and by increasing the exchange-risk faced by participants in the market.

This paper reviews and compares the recent experiences of four Latin American countries -- Argentina, Chile, Colombia and Mexico– and five East Asian countries –Indonesia, Korea, Malaysia, the Philippines and Thailand– that have received capital inflows in recent years, and discusses how they have dealt with the macroeconomic side effects of capital inflows. The major findings of the paper are the following:

- First, it can be argued that all the countries in the sample have been successful in avoiding a permanent and significant increase in inflation.

- Second, while Chile, Indonesia, and Malaysia have avoided a significant real exchange rate appreciation, Argentina, Korea, Mexico, and the Philippines have had a strong appreciation of the real exchange rate. Thailand lies in between these two groups.

- Third, the countries that have received the largest capital inflows (as a percentage of GDP) on average during 1989-92, are not those that have experienced the largest real exchange rate appreciation, implying that the application of different economic policies may have helped to contain the appreciation of the real exchange rate, in spite of receiving significant capital inflows.

- Fourth, those countries that show a decreasing pattern of government consumption –as a percentage of GDP– are also those that show a lower real exchange rate appreciation, while those countries that show an increasing share of government consumption in GDP are the same that show the highest real exchange rate appreciation.

- Fifth, it could be argued that, with the exception of Chile in Latin America and Korea and the Philippines in East Asia, countries in the latter region have tended to rely more on a restrictive fiscal policy than countries in Latin America to counteract the macroeconomic effects of the recent surge of capital inflows.

- Sixth, sterilized intervention is most effective when it is accompanied by fiscal restraint. However, it does not seem to be a sustainable policy in the long-run as sterilized intervention tends to exacerbate capital inflows rather than to ameliorate them. This occurs because it tends to increase the differential between domestic and foreign interest rates. Furthermore, sterilized intervention worsens the quasi fiscal deficit of the Central Bank.

- Seventh, an increase in public sector savings seems to be the only sustainable policy to protect the real exchange rate in the long run and seems to be perceived more favorably by the international investors community. However, a mixed fiscal-monetary policy seems to be more appropriate in the short run than pure fiscal policy. This occurs because fiscal policy usually lacks the required flexibility to deal with volatile capital flows in the short run.

Although these conclusions are drawn from the analysis of only nine developing countries --selected among the major recipients of capital inflows in recent years--, most likely the economic policy lessons that result from these experiences can also be applied to any low- or middle-income country that starts experiencing a sudden increase in the flow of foreign exchange. This surge in the flow of foreign exchange may result either from a surplus in the capital account or in the current account.

MACROECONOMIC ADJUSTMENT TO CAPITAL INFLOWS: LATIN AMERICAN STYLE VERSUS EAST ASIAN STYLE

1. Introduction

The debt crisis of 1982 was precipitated by a sudden reduction in capital inflows at a time when highly indebted developing countries were facing a slow down of the world economy, a large increase in international interest rates, and a sharp loss in terms of trade. Weak economic policies and institutions exacerbated the effects of these shocks. Under these circumstances, the sharp cut-off of capital inflows forced a quick and sharp increase in the size of the required net external transfer. In the short run, the increase in the external transfer took the form of a sharp reduction of imports with negative effects on economic activity, investment rates and future growth.

After the initial shock, most highly indebted countries were occupied during the rest of the decade adjusting policies and institutions to the new scenario of extremely restricted availability of external financing. This adjustment process was intended to restore a sustainable balance of payments situation, while creating the basis for sustainable growth. Some countries had even the expectation of an eventual return to international capital markets, but this time, to reduce their exposure to external shocks, they wanted to rely less on debt and more on direct foreign investment and portfolio investment.

In the initial years following the debt crisis, most of the lending to developing countries took the form of official lending from International Financial Institutions. This lending supported reforms of policies and institutions to create the appropriate conditions to reestablish the macroeconomic balances and to lay the foundations for sustainable growth.

In recent years, private capital inflows towards countries that have advanced in their adjustment efforts have increased sharply. In fact the Capital Account Surplus (including net errors and omissions) for all developing countries increased from 74.9 billion dollars in 1987, to 83.3 billion dollars in 1990 and further to 146 billion dollars in 1991 and 1992.[1] The repatriation of the capital that had flown out of these countries in the early 1980s has financed part of these capital inflows. These inflows have taken the form of a combination of commercial lending from banks and suppliers, direct foreign investment, and portfolio capital. For the case of portfolio investment the interest has arisen from the possibility of providing risk capital financing for the expansion of the private sector. This type of inflow increased from 6.2 billion dollars in 1987 to 37.2 billion dollars in 1992, and reached 26.9 billion dollars in the first half of 1993 alone.[2] However, there has also been much interest in attracting direct foreign investment as this type of inflow comes with access to new technologies and markets. These flows have been encouraged by the host countries through a combination of removal of restrictions, and better prospects as a result of the macroeconomic reforms.

The increase in capital inflows is beneficial for the host countries because it relaxes the severe financial constraint that they faced during much of the 1980s. Also, this new wave of capital inflows is different from the capital inflows that occurred in the late 1970's and early 1980's, because now the resources are going to the private sector and predominantly in the form of equity rather than debt financing.

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1 *World Economic Outlook*, IMF, May 1993.

2 Sudarshan Gooptu (1993) and John Williamson (1993).

With the debt crisis so close in time, it appears paradoxical that in the early 1990s there is a problem of receiving "too much" capital. Nevertheless, the increase in capital inflows to developing countries is a matter of concern because of the macroeconomic and other related effects in the recipient countries. Indeed, capital inflows **could** potentially be a problem if they are of a short term nature and highly volatile. This type of inflows, also called ***hot money***, is usually attracted by some imperfections or policy mistakes that create a large gap between domestic and expected devaluation-augmented foreign interest rates. This type of inflows could create undue instability in inflation rates and in the nominal and real exchange rates. If there are imperfections in capital markets and hysterisis type of effects in the export and import competing sectors, or real bankruptcy and reallocation costs, then these fluctuations could have important economic costs.

Not surprisingly, in many countries the economic authorities try to discourage *hot money* by lifting the imperfections that encourage them in the first place, or by controlling the side effects of capital inflows through different types of government intervention. Capital inflows of a more cyclical variety could also create cyclical fluctuations in the real exchange rate. The latter could create difficulties to the tradable sectors and to the overall macroeconomic management. This type of flows creates troubles similar to the traditional Dutch disease problem of a mineral discovery.

In this paper we first review the macroeconomic and other related effects of capital inflows. Second, we try to clarify the paradox mentioned above and discuss the reasons why a country could be concerned about receiving "too much" capital inflows. Third, we analyze the different economic policies that countries can use to deal with the side effects of capital inflows.[3] Fourth, we study the actual way in which nine different developing countries, four Latin American and five East Asian, have dealt with capital inflows in recent years. Finally, by comparing the actual experiencies of these countries, we draw some conclusions on how to manage capital inflows in order to minimize some of their side effects.

2. The Macroeconomic and Other Related Effects of Capital Inflows

2.1 The Macroeconomics of Capital Inflows

Capital inflows, by permitting a relaxation of the liquidity constraint facing recipient countries, may reduce domestic interest rates, and result in an increase in the level of domestic expenditures. The increase in private and public expenditures put in motion a price adjustment process. For the purpose of the analysis suppose that the country produces and consumes three goods: an exportable good, an importable good, and a non-tradable good. Assuming that the terms of trade between the importable and the exportable goods are fixed, these two goods can be grouped into just one good that we call **tradable**. Following the expenditure increase (made possible by the capital inflow) and given a pattern of demand for these two types of goods, part of the increase in expenditures will go into tradable goods and part into non-tradable goods. The increase in expenditures on tradable goods will increase the size of the trade deficit and in this way will help to accommodate directly the capital inflow. If this were all, the adjustment would be easy. The only concern about capital inflows would be on the sustainability of the inflow and on the solvency of the country.

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[3] Those readers who are familiar with the theoretical aspects of our discussion can skip sections 2, 3 and 4, in particular sub-sections 2.1 and 3.2.

However, this is not all. The increase in the demand for non-tradable goods creates, at the existing relative price between tradable and non-tradable goods, an excess demand for non-tradables. The excess demand for non-tradables will result --independently of the exchange rate regime-- in an increase in the relative price of non-tradable goods; that is, an appreciation of the real exchange rate. The real exchange rate appreciation will, in turn, create incentives for the reallocation of factors from the tradable to the non-tradable sector, and for a switching of expenditures from non-tradable towards tradable goods. The final result is a real appreciation, a larger non-tradable sector, a smaller tradable sector, and a larger trade balance deficit. The real appreciation will occur either through an appreciation of the nominal exchange rate (under a floating exchange rate system), or through an increase in the nominal price of the non-tradable good (in a fixed or preannounced exchange rate system)[4]

The real appreciation is the price mechanism at work. The increase in domestic expenditures, made possible by the initial capital inflow, puts the whole process in motion, and together with the real appreciation and the demand and supply characteristics for both types of goods, determines the final size of the trade balance deficit. This is the standard macroeconomics of the transfer problem. The same sort of process will be set in motion by an increase in short-term borrowing, an increase in official capital, or an increase in direct foreign investment. However, the latter two types of capital inflows are much less reversible and therefore the real appreciation will be much less volatile. But still the economic authorities may want to smooth the evolution of the real exchange rate. Also a similar adjustment process would result from a mineral discovery or a permanent increase in the terms of trade. The only difference is that in the latter case the export good that benefits from the increase in price will end up with an increase in production, while the rest of the tradable sector will lose resources to the expanding export good and to the non-tradable sector. This is the well known "Dutch disease problem" analyzed by Corden and Neary (1982) and Corden (1984).

2.2 Other Side Effects of Capital Inflows

There are two other effects related to an increase in capital inflows. First, the larger amount of capital brought into the country will increase the volume of funds being intermediated through the domestic capital markets, and, therefore, will cause an expansion in the volume of domestic financial assets and liabilities. Second, in a fixed or predetermined exchange rate system, the monetization of large capital inflows will have an inflationary effect through the price of the non-tradable goods.

3. Why should a government be concerned about the increase in capital inflows?

3.1 The General Case

There are several reasons why recipient countries are usually concerned about a large increase in capital inflows.

First, for those countries with a weak supervision of their financial system, the larger amount of funds being intermediated may exacerbate moral hazard problems, and result in a financial bubble that could eventually lead to a financial crisis.

Second, in countries that have recently reformed their trade policies improving their integration into the world economy, the real exchange rate appreciation that is required for the transfer to take place

[4] The dynamics of an economy with a floating exchange rate system is different from the one explained in this section, but the final result of a real exchange rate appreciation remains. See Dornbush (1976) and Calvo and Rodriguez (1977).

may erode the profitability of the trade-oriented sectors and, therefore, put in jeopardy the undergoing trade reform. Reforming the trade regime to reduce the discrimination against exports entails tariff reforms, and an initial real depreciation accompanied from there on by a fairly stable real exchange rate adjusted for fundamentals (Thomas et. al. 1990). For countries that have initiated a trade reform, the real appreciation that goes with the higher expenditures could work at cross purposes with the liberalization of trade, and could eventually result in a loss of credibility on the sustainability of the reforms. The main concern here is on cyclical capital inflows that would result in a real exchange rate misalignment, with important real costs. These costs will persist even after the reversal of the initial misalignment.

Third, in countries that are pursuing a stabilization program with a fixed or preannounced nominal exchange rate as an anchor for domestic prices, the authorities could be concerned about the monetization effects of large capital inflows and their lack of control on monetary policy. In a fixed exchange rate system with an open capital account and with domestic assets that are close substitutes for foreign assets, the effectiveness of monetary policy is severely impaired (Mundell, 1968). In this setting the expansion in high powered money caused by the larger capital inflows will have inflationary effects through the price of the non-tradable goods.[5]

Fourth, if capital inflows are volatile and/or of a temporary type, the reversibility of flows can have real adjustment costs that occur because of resource reallocation costs, bankruptcies, price rigidities, hysterisis or other market imperfections. If the capital inflows are considered to have a large temporary component, the country will try to avoid to go through a whole adjustment process to be reversed later on. Reversing an initial adjustment could be quite costly if there are irreversible costs involved. Related to this, for those countries with a more flexible exchange rate system, the capital inflows could be the source of excessive volatility in the nominal and real exchange rate. This is particularly relevant in the case of *hot money*.

Fifth, there always exists the concern about maintaining a sustainable Current Account Deficit over GDP ratio in the long run. A too sudden increase in this ratio, specially if due to a domestic consumption boom, could raise the country's risk premium as well as restrict its future access to international capital markets.

Finally, there is a political economy argument. In many countries the government could be subject to strong political pressure from interest groups in the exporting and import-competing sectors, in order to avoid or to limit the size of the real exchange rate appreciation that could result from the capital inflows. In this case, many governments are forced to undertake "exchange rate protection" actions.

3.2 What is different about Portfolio Investment?

In the previous section we briefly discussed the potential macroeconomic problems created by capital inflows. However, the previous discussion applies to capital inflows in general as we did not make any distinction among the different types of capital inflows. In this section we look at the particular features of **portfolio investment** and the specific macro problems related to them

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5 Assuming that the increase in money supply is larger than the increase in money demand.

3.2.1 Volatility

The most outstanding feature of portfolio investment, as opposed to other forms of capital inflows –such as direct foreign investment, borrowing from international financial institutions, or long term bank loans– is that they present a potential risk of a reversal of flows in a very short term; i.e., the possibility that foreign investors may suddenly decide to leave the country they are investing in. This potential risk of flow-reversal is only comparable to the case of short term bank loans (*hot money*) and may be very harmful in terms of either a greater exchange rate volatility or a greater interest rate volatility, or both. Furthermore, if the Central Bank lacks the necessary speed of reaction and the stock of international reserves is at a low level, it may cause a balance of payments crisis.[6]

A negative shock --such as a disappointing political development, a decrease in the price of the main exportable good, an increase in the price of the main importable good, or a change in taxes affecting the returns from these inflows-- may induce foreign investors to take their money out of the country. Alternatively, they will be willing to keep their investment in place only if a higher return is provided. In both cases they will react by selling their domestic stock holdings and, with the proceeds, will buy foreign currency. This will (initially) cause a fall in the general stock price index and, depending on the exchange rate system, either an increase in domestic interest rates or a depreciation of the exchange rate, or both.

Under a floating exchange rate system, and if domestic assets are perfect substitutes for foreign assets, a large increase (with overshooting) in the price of the foreign exchange will occur. The actual depreciation of the domestic currency will be such that its future expected appreciation (given the overshooting) will exactly compensate foreign investors for the difference between the domestic interest rates (that stay at the same initial level) and the higher interest rates they demand after the negative shock occurs.[7]

Under a fixed exchange rate system, and again assuming perfect substitution between foreign and domestic assets, domestic stock prices will fall, the level of international reserves at the Central Bank will fall, and domestic interest rates will rise as domestic liquidity (i.e., the stock of nominal money) falls.

Alternatively, if a favorable shock occurs such that foreign investors want to invest more in the host country, stock prices will increase, and depending on the exchange rate regime either domestic interest rates will drop and the stock of money will increase (under a fixed exchange rate system), or the exchange rate will appreciate up to a point where the expected depreciation compensate foreign investors for the lower expected return they demand after the favorable shock occurs (under a floating exchange rate system).

If foreign and domestic assets (i.e., stocks) are **not** perfect substitutes, then domestic interest rates may differ from the expected depreciation-augmented foreign interest rates. In such a case the adjustment in interest rates (under a fixed exchange rate system) or in the exchange rate (under a floating exchange rate system) **will be less severe**, although it will follow the same pattern. Thus, if a negative shock occurs in a floating exchange rate system, stock prices will fall and domestic interest

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6 It is important to note that, on an empirical basis, there is no conclusive evidence concerning the different degree of volatility of the different sources of external financing. See Claessens et. al. (1993).

7 In the analysis we are assuming that domestic prices do not adjust immediately, i.e., that commodity markets adjust slower than asset markets. See Dornbusch (1976) and Calvo and Rodríguez (1977).

rates will increase (under perfect substitution domestic interest rates remain constant). Therefore the exchange rate will overshoot less than in the perfect substitution case. Under a fixed exchange rate system the same negative shock will cause a **smaller** increase in domestic interest rates in the case of imperfect asset substitution than in the case of perfect asset substitution.[8]

All these price movements can be an important source of uncertainty that restrain investors (foreign and domestic) from investing, and, at the same time, they can be very damaging for the economy as a whole if the fluctuations in interest rates or exchange rates are too wide. The loss for the economy as a whole occurs because of bankruptcies and hysterisis effects when interest rates increase and/or the exchange rate appreciates (the latter applies only for the exporting and import-competing sectors).

In order to avoid all these adverse price movements the authority will have to intervene, either by trading foreign currency in a floating exchange rate system, or through sterilization in the case of a fixed exchange rate. Either way the Central Bank will be, somehow, making the functioning of both exchange rate regimes very similar.[9]

3.2.2 Portfolio Investment and Macroeconomic Fluctuations

Another important characteristic of portfolio investment, as opposed to other forms of capital flows such as bank loans, is its behavior during the different phases of the macroeconomic cycle. In fact it has been argued that bank borrowing exacerbates the cycle because of its pro-cyclical pattern, i.e., banks are willing to lend more during the expansionary and recovery phases of the cycle than during recessions. However, because portfolio investment implies that private gains and losses occur whenever stock prices fluctuate, private investors will restrain from selling (or buying) every time stock prices are "too" low (or "too" high), i.e., they will try to avoid the realization of capital losses. This behavior will result in an endogenous smoothing mechanism of the cycle. Of course this reasoning applies only when domestic and foreign assets are not perfect substitutes.

4. What can be done to deal with the side effects of capital inflows?

Many countries have tried in recent years to gain access to international capital flows while, at the same time, protecting the macroeconomic situation from a large real appreciation and/or an acceleration of inflation. To deal with these potential problems caused by capital inflows, countries can use either indirect methods, direct methods, or both.

4.1 Direct Methods

If capital inflows, due to their size or composition, are considered to create macroeconomic problems of the type discussed above, and they are motivated by imperfections or policy inconsistencies in the domestic financial markets, countries may try to eliminate the distortion that is causing the capital inflow. The type of distortion that encourage short-term capital inflows are, for example, keeping a high domestic interest rate, while at the same time offering free currency risk

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8 It is important to note that **only** in the case when substitution between foreign and domestic assets is less than perfect is it possible for the Central Bank to sterilize capital inflows. This will show to be important later on when we discuss the actual country cases.

9 Although it is not clear that the government is better able to distinguish permanent from transitory capital movements (i.e., shocks) than is the private sector, the evidence from developed countries for the past decades suggests that there is a need for governments to attempt to stabilize real and nominal exchange rates.

protection through a swap facility at the Central Bank.[10] Also, offering free deposit insurance at domestic commercial banks, along with a high domestic interest rate and a fixed nominal exchange rate may cause an increase in capital inflows.

Short term speculative capital inflows (*hot money*) could also result from a restrictive monetary policy that accompany an expansionary fiscal policy. In the latter case changing the policy mix towards a more restrictive fiscal policy and a less restrictive monetary policy, by reducing domestic interest rates to a level closer to the sum of international interest rates and the expected rate of devaluation, i.e., getting closer to the interest rate parity condition, reduces the incentives for capital inflows of the type that respond mainly to interest rate differentials and/or to the expectation of a future drop in domestic interest rates, that is, bank loans and portfolio investment.

If the ultimate cause of the increase in capital inflows could not be dealt with, and the country is concerned with the macroeconomic effects of capital inflows, it could try direct methods to control the size of them. Direct methods consist of imposing restrictions on capital inflows in order to reduce their amount. Measures include ceilings on foreign borrowing, minimum reserve requirements on foreign loans, ceilings on foreign direct investment, etc. The authorities could also try to reduce the size of the inflows through taxation of the flows through a Tobin's interest rate equalization tax. This measure works only in the short run as it is very difficult to have effective ways to control capital flows in the long run (see Mathieson and Rojas, 1993, and Schadler et. al., 1993).

4.2 Indirect Methods

Indirect methods comprise the following:

• Intervention, i.e., the purchase of foreign currency by the Central Bank in order to support the nominal exchange rate. This can be of two types: sterilized and non-sterilized. In the case of sterilized intervention the Central Bank also carries out open market operations to mop up the liquidity created by the initial purchase of foreign exchange. The sterilization could also be done by imposing other restrictions that work through a reduction in the money multiplier --such as an increase in commercial bank's required reserves or a ceiling in total commercial bank's credit-- which also helps to avoid the monetization effect of the purchase of foreign currency (i.e., limits the increase in the money supply). However, the room in this area is limited by the degree of substitution between foreign and domestic assets. In a fixed exchange rate or preannounced nominal exchange rate regime ("tablita"), the more open is the capital account and the higher is the degree of substitution between domestic and foreign assets, the less effective is this policy.[11] Also this policy usually increases the quasi fiscal deficit of the Central Bank.

In countries with a level of output close to the potential output, non-sterilized intervention is usually implemented with another policy to restrain aggregate demand.

• Fiscal Adjustment. A restrictive fiscal policy is intended to have a macro effect and a composition effect. The first effect (*ceteris paribus*) attempts to counteract for the increase in aggregate demand that is created by the capital inflows. The second effect (again, *ceteris paribus*) helps to keep a higher real

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10 This happened, for example, in Chile in 1990. See the country analysis below.

11 For a recent review of the basic economics of capital inflows in a IS-LM framework see Frankel (1993), for a recent review of Central Bank intervention see Edison (1993), and for a recent review of the policy issues associated to capital inflows see Calvo et. al (1993b).

exchange rate than otherwise, as government consumption is most likely more intensive in non-tradable goods than private expenditures.

• Current Account Liberalization. The liberalization of the Current Account helps to ease the pressure on the domestic economy by shifting aggregate expenditures towards tradable goods. Like a restrictive fiscal policy it has a composition effect that helps to keep a higher real exchange rate than otherwise.

• Capital Outflow Liberalization. The liberalization of capital outflows may induce domestic investors, such as pension funds, to take their capital abroad. This may partially compensate for the effects of capital inflows.[12]

• Move towards a floating exchange rate system. By moving closer to a floating exchange rate regime, such as widening the band in a target zone exchange rate system, the exchange rate risk faced by market participants increases. Therefore, there will be less interest in bringing short-term speculative capital inflows.

4.3 Dealing with Volatility

The previous discussion refers to policies concerning mainly the real exchange rate and inflation problems. In what follows we briefly discuss some potential policy measures to deal with the volatility associated to portfolio investment.

• Restricting capital outflows. The purpose of this policy is to reduce the risk of a flow reversal by limiting the amount of capital that foreign investors are allowed to take out of the country within a certain period of time. Although this policy can be quite effective in reducing the potential damage of a sudden capital outflow, it is also very likely to reduce the amount of portfolio investment in the first place, limiting the economic benefits of having access to foreign financing.[13]

• Lifting all restrictions on capital outflows. Given the previous result, one alternative policy is to allow domestic residents to invest in all kinds of foreign assets with no restrictions. This will have two different effects: first, as foreign investors will visualize the host country as less risky (in terms of a lower probability of getting stuck in it) it may increase the amount of capital inflows; second, as domestic assets will be better diversified internationally, the effects of a negative shock will be less severe in the first place. Overall, this policy may reduce the probability of a flow reversal.

• Opening the current account. A reasoning similar to the one in the previous paragraph implies that the opening of the current account may be useful in limiting the effects on the host country of a negative shock. The opening of the current account will usually mean that the host country's real assets will be more diversified. Therefore, the economy as a whole will be less affected by a negative shock affecting an specific productive sector.

• Maintaining long-term fiscal and monetary targets. It should be clear at this point that the final purpose of any potential policy measure should be to build an economy more resilient to external shocks, such that foreign investors do not want to leave the country when a negative shock occurs. In this respect having some fiscal flexibility is a necessary requirement in order to maintain a long- and

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12 This is an ambiguous result. In some models a liberalization of capital outflows cause a larger capital inflow. See Laban and Larrain (1993).

13 See previous footnote.

short-term balanced budget. The fiscal equilibrium is necessary to avoid an increase in inflation when a negative shock occurs. In the same respect a long-term monetary target is almost a must, while building a large stock of international reserves may be very useful to face a shock. Finally, it is important to notice that holding more reserves and maintaining fiscal and monetary discipline helps not only because of the better shock absorber capacity of the economy, but also because of the "signaling" or "reputation effect" on foreign investors.

• Having greater flexibility. One useful policy tool which helps to build a stronger shock resistant economy, is to have a greater discretion in terms of forcing the allocation of resources in some specific uses. For example, forcing the investment of private savings -such as pension funds- in Central Bank's bonds (or in foreign assets), may help to sterilize the expansion in high powered money caused by a sudden capital inflow. Alternatively, a sudden capital outflow that heavily reduces the amount of (domestic) money may be compensated by forcing domestic institutional investors to hold less Central Bank's bonds.

In sum, dealing with the risk of potential flow reversal of portfolio investment is not a matter of restricting capital outflows, but building shock absorber mechanisms such that the effects of a negative shock to the economy are minimized.

5. Dealing with Capital Inflows: Some recent country experiences

As capital inflows towards some developing countries resumed in the late 1980s and early 1990s, countries had to deal with some of the problems that we discussed in the previous sections. In this section we review some specific country experiences in dealing with the macroeconomic problems created by the capital inflows. Because we are interested in the way countries responded to the surge in capital inflows, we will concentrate our discussion in those policies that are most related to this phenomena. Nevertheless, in recent years several developing countries have also implemented major macro-stabilization programs and reforms, aimed to transform their economies and integrate them more with the world economy.[14] Thus, the policies implemented by some of the countries studied below are part of the undergoing transformation and stabilization programs.

5.1 Argentina

Argentina, as the other countries analyzed in this paper, has received important amounts of capital inflows for the past two years. In fact it appears as the third largest recipient of portfolio investment flows among all Latin American countries during 1989-June 1993, after Mexico and Brazil.[15]

As opposed to other countries in our sample, until very recently and for more than a decade inflation in Argentina has been persistently high (hyperinflation in 1989-90; see table 1). This was the result of a high structural public sector deficit (the deficit of the Central Bank alone was almost 4.5% of GDP in 1989).[16]

Beginning in mid-1989, the country started a new period of economic growth and low inflation that has been achieved through a profound transformation of the economy. The latter comprises major

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14 In particular, Argentina, Mexico, and the Philippines in recent years (late-1980s), while all the other countries earlier in the decade (mid-1980s).

15 See Gooptu (1993).

16 The 1987-89 average for the Non-Financial Public Sector balance is -3.7% of GDP.

structural reforms to the Federal Government, the Central Bank, public enterprises, the tax system and both the foreign exchange and foreign trade regimes. As part of this process, in June 1990 Argentina resumed partial interest payments to commercial banks.[17] Later on, in 1992, Argentina reached a Brady-type agreement to restructure and reduce its public external debt with commercial banks. In this agreement approximately US$ 28 billion were restructured (including about US$ 20 billion of principal debt outstanding and US$ 8 billion of past due interest).

The economic reform implemented in Argentina has been extremely profound and has proceeded very fast. Among the most significant structural reforms are the following:

- In January 1990, the Central Bank forced the conversion of its short term interest bearing obligations with the public, mostly seven days maturity bills, into long term bonds with ten years maturity denominated in dollars. This step alone reduced the quasi fiscal deficit of the Central Bank by about 4/5.

- A major restructuring of the tax system, with more reliance on the VAT, and in the tax administration system. This reform has enabled the federal government (including the national social security system) to increase its tax revenues in almost 4 percentage points of GDP, from 12.9% of GDP in 1989 to 16.7% of GDP in 1992.

- An administrative reform to reduce the size and the scope of the federal government and to improve the control mechanisms of public expenditures. As a result of this reform total employment in the federal government has fallen by more than 50% between 1990 and 1992, while the non-financial public sector balance became positive for the first time in many years in 1991 (0.2% of GDP).[18]

- A major privatization program started in 1990 with the sale of public assets and enterprises, many of them non-profitable. Until end-1993 the privatization program generated almost nine (9) billion dollars in cash revenues, while foreign debt was reduced by approximately fourteen (14) billion dollars. Also, it is estimated that two thirds of all foreign capital entering Argentina in 1992 was due to privatizations.[19]

- In April 1991, the Government enacted the **Law of Convertibility** as an attempt to accelerate the stabilization of domestic prices. Under this new exchange rate regime the nominal exchange rate is used as an anchor for the domestic price level. The law fully guarantees convertibility of the local currency at a constant nominal rate and proscribes money creation except for the purchase of foreign assets.[20]

- In September 1992, a new Central Bank Law was enacted that made it independent of the non-financial public sector deficit. The new Central Bank Charter prohibits lending to the non financial public sector and proscribes rediscounts (although in the latter case some special exceptions apply).

- In 1991, the government accelerated and completed a trade liberalization program that virtually eliminated all export taxes and all quantitative constraints on trade, except for automobiles. Also the

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17 The government stopped these payments in March 1988.

18 Total employment in the national administration fell from 671,479 in 1990 to 284,215 in 1992. However, this includes the transfer of teachers and health personnel to the provinces. During 1989-93 the number of public employees was reduced by more than 300,000 through privatizations, attrition, and voluntary retirement.

19 Source: "Situacion Latinoamericana", N° 13, February 1993.

20 These assets may include dollar-denominated Argentina Government Bonds up to 30 percent.

maximum tariff on imports was reduced to 20% (after being 115% in mid-1988) with some exceptions at 35%. In October 1992, the government (in an attempt to compensate the export- and import-competing sectors for the real exchange rate appreciation) increased in five percentage points the tax rebate allowed to exporters and from 3% to 10% the flat tariff surcharge applied to imports.

The policies implemented in Argentina have been aimed mainly at reducing the inflation rate and the public sector deficit, rather than to deal with the problems created by capital inflows. In fact there has been a shift away from inflation tax and inefficient taxes on trade and financial intermediation, and towards other sources of government revenue, in particular the VAT.

The policies have succeeded in reducing domestic inflation. The average monthly inflation rate has been 5.2% in 1991 and 1.4% in 1992, while in 1989 it was 39% per month. In terms of the real exchange rate the result has been a real appreciation of, approximately, 21% and 27%, since the convertibility plan began in April 1991 and until the end of 1992 and the end of 1993 , respectively.[21] The real exchange rate has appreciated systematically for the last three years as a result of using the nominal exchange rate as an anchor for domestic prices in the current (and previous) stabilization plans.

In spite of the favorable results mentioned above and although a major effort has been made in terms of both, increasing tax revenues and cutting expending at the federal government level, overall public expenditures have not fallen mainly because of an increase in transfers to the provinces and in expenditures at the provincial level. Also, the increase in foreign savings has been partially compensated by a fall in domestic private savings. Overall, a significant effort in cutting public expenditure remains to be done, particularly at the provincial level.

Given the scope and the purpose of this paper, it is extremely difficult to evaluate the outcome observed in Argentina, mainly because of the existing economic conditions prior to the stabilization program (i.e., during 1988-89) which were completely different than those in Chile or Korea. In fact, it can be argued that the appreciation of the real exchange rate in Argentina is more related to inflation inertia and to the use of the nominal exchange rate as an anchor for domestic prices, than to the increase in aggregate domestic expenditures that is financed with the increased capital inflows, which is the case we are concerned with in this paper. Nevertheless it is still possible to argue that a more restrictive fiscal policy, specially at the provincial level, is required in Argentina.

5.2 Chile

The Chilean economy is today the fastest growing economy in Latin America. A host of structural reforms have been introduced in Chile during 1973-1992, aimed to achieve macroeconomic stability and to increase the efficiency of the economy. The general direction of these reforms has been to increase the role of markets, to open the economy to foreign trade, and to give an increasing participation to the private sector in the economy. [22]

Since the mid-1980s, the main instrument of monetary policy used in Chile has been the 90-day real interest rate on Central Bank liabilities[23]. This rate is adjusted upwards whenever the level of aggregate

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21 Using the Trade Weighted REER (CPI) Index

22 For a review of the reforms introduced in Chile in the last twenty years see Corbo (1993) and Corbo and Fischer (1993).

23 As most financial contracts are indexed to future inflation, Chile can pursue a real interest rate policy .

demand is resulting in an acceleration of inflation, in an increase of the current account deficit, or in an appreciation of the real exchange rate.[24]

In early 1990, Chile experienced an investment boom, an export boom, a drop in international interest rates, and an acceleration of domestic inflation. As a response the Central Bank increased the 90-day real interest rate on Central Bank's papers by 230 basis points (from 6.9 to 9.2 percent per year). As a result there was a large increase in capital inflows on top of the large increase in direct foreign investment that was already taking place. To avoid the excessive monetization of these inflows, or a sharp drop in the nominal exchange rate, the Central Bank practiced an aggressive policy of sterilized intervention.[25] As a net result, in 1990 alone the Central Bank ended up accumulating 2.4 billion dollars in foreign reserves. Furthermore, the issuing of Central Bank debt to carry out the sterilization resulted in large losses for the Central Bank as it borrowed at high domestic interest rates to invest abroad at lower rates adjusted for exchange rate changes.[26]

As it became increasingly difficult and costly to pursue an independent monetary policy, in June 1991 the Central Bank started to accommodate a real appreciation and to take a set of actions to reduce capital inflows. On that date, the central value of the exchange rate band was appreciated by 2%, a stamp tax was imposed on capital inflows, and minimum reserve requirements were imposed on short-term (less than one year) foreign credits. At the same time a reduction from 15% to 11% in the maximum import tariff was approved. Furthermore, in January 1992, as it remained very difficult and costly to affect the trajectory of the nominal and real exchange rate through sterilized intervention, the peso was revalued 5% and the width of the exchange rate band was increased from ±5% to ±10%. The first part of the measure was meant to "accept" a minor revaluation, and the second to increase the exchange rate risk and in this way to reduce the profitability of domestic bonds for foreign investors. At the same time the reserve requirement on foreign credits was extended to foreign currency bank deposits.

As the central bank continued its policy of increasing the domestic interest rate to control aggregate demand and inflation, these measures were not enough to discourage capital inflows. Then, to increase the exchange rate risk in March 1992 the Central Bank announced that beginning that date it was going to intervene in the foreign exchange market even if the price of the dollar was well within the exchange rate band.

In May 1992 the reserve requirement on foreign credits was increased to 30%. The only exception was made for capital inflows with a maturity period longer than one year, that were registered with the Central Bank under article 14 of the foreign exchange regulation. For the latter type of inflows the reserve requirement was set at 20%. In July 1992 the Central Bank modified the exchange rate mechanism. The peg was changed from the US dollar to a basket of currencies, retaining the size of the band around the central rate. The purpose of this measure was, again, to increase the exchange rate risk faced by foreign investors. In August 1992 the reserve requirement on capital inflows that entered under article 14 of the foreign exchange law was also raised to 30%.

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24 The Central Bank is implicitly operating with target ranges (or upper limits) for the inflation rate and for the current account deficit of the Balance of Payments (as a share of GDP) and with a lower limit for the real exchange rate. For details see Corbo and Fischer (1993).

25 Implicit in this policy was the view that in a world of imperfect asset substitution the Central Bank, through sterilized intervention, can effectively change the supplies of domestic and foreign assets, and in this way it can affect the evolution of the nominal and real exchange rate.

26 For an evaluation of macroeconomic policies in recent years see Corbo and Fischer (1993).

Finally, starting in 1992 a selective deregulation of capital outflows was introduced to give some breathing space to the expensive policy of reserve accumulation.

This brief review of the policies that Chile has used to deal with some of the side effects of capital inflows, mainly sterilized intervention, illustrates the difficulties that a country faces in the global capital markets of the 1990s when it wants to follow a restrictive monetary policy while pursuing also an inflation and a real exchange rate target.

5.3 Colombia

As opposed to the other countries analyzed in this paper, Colombia has not received significant capital inflows in recent years. Nevertheless, starting in 1986 Colombia has suffered the Japanese problem, i.e., a very robust Current Account surplus that will become more robust with the oil discoveries of Cusiana and Cupiagua. As the problems created by a robust current account surplus are the same as those created by a surge in capital inflows (i.e., a real exchange rate appreciation and an acceleration of domestic inflation), it is worth to analize the policies implemented in Colombia in recent years.

Beginning in 1986 and partially because of the current account surplus, domestic inflation accelerated in Colombia, increasing continuously from 18.9% in 1986 to 23.3% in 1987, 25.8% in 1989, and 29.1% in 1990. GDP growth reached 4.6% for the period 1986-1990.

In early 1990 the government formulated a medium-term strategy aimed at a more radical transformation of the Colombian economy. The major objective of this strategy was to open up the economy to external competition to improve its efficiency, especially in the import-competing sectors, to promote the growth of non-traditional exports, and ultimately to achieve sustainable growth. In the new strategy the continuous reduction of inflation is a key intermediate objective to provide an environment conducive to growth. Reforms were introduced in trade, financial, and labor policies, and in public enterprise management and privatization.

Much has been already accomplished in the reforms of the trade regime. Most nontariff barriers were eliminated and the average import tariff was reduced from 43.7% in December 1989 to only 11.7% in March 1992. By most standards this is a profound and rapid trade reform.[27] Initially the reform was going to be gradual but its pace was accelerated when the large surplus in the current account of the balance of payments was resulting in a large accumulation of foreign reserves (Ocampo, 1992). Restrictions on foreign exchange transactions were also liberalized in 1990, lifting the prohibition to have foreign accounts and allowing financial intermediaries to trade in foreign exchange. Reforms also included the liberalization of direct foreign investment regulations and the lifting of restrictions on profit remittances.

The opening up of the Colombian economy has been followed by a very robust current account performance. As shown in Table 3, the current account surplus reached 0.33% of GDP in 1990, and 3.12% in 1991.

As the Central Bank atempts to reduce domestic inflation and avoid a real appreciation of the peso, it has responded by keeping an upper bound on the growth of aggregate monetary indicators and by using a preannounced exchange rate policy, where the value of the peso is depreciated on a continuous basis.

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[27] On trade reforms in developing countries see Thomas et. al (1990).

To achieve its monetary target in both 1990 and 1991, the Central Bank intervened using sterilization. The mopping up of liquidity resulted in a sharp increase in domestic interest rates, with the deposit rate increasing from 29.2% in March 1991 to 38.5% in December of the same year. As a consequence there was a large build up of foreign reserves and an increase in the quasi fiscal deficit of the Central Bank.

Sterilization was also carried out by raising the reserve requirements on bank deposits. Initially the average reserve requirement rate was raised in 1990 and then, as foreign reserve accumulation continued, the marginal reserve requirement rate was raised to 100% in January of 1991. As a result there was a sharp increase in lending rates resulting from the increase in deposit rates and the increase in reserve requirements. As the increase in interest rates was slowing down the economy, in September 1991 the marginal reserve requirement was eliminated and the basic rate was raised 5 percentage points. These sterilization measures were accompanied by measures aimed at reducing the amount of reserve accumulation in the central bank. Thus, in the second half of 1991 banks were required to hold a minimum of their net worth in foreign exchange. Also the minimum period to pay for imports bills was reduced continuously during the period.

As pressure continued to build up for a reduction of interest rates, and as the quasi-fiscal deficit of the central bank was pressuring the public finances, later on the Central Bank changed its policy from the control of monetary aggregates to the control of the lending rates of financial intermediaries. This change in policy was followed by a drop in interest rates that contributed to an increase in domestic expenditures and a slow down of short term capital inflows. The resulting reduction in the current account surplus and the decrease in capital inflows resulted also in a slow down in the level of reserve accumulation. Therefore, the need to carry out open market operations with Central Bank certificates has been reduced[28].

From this brief review of the recent experience in Colombia, like in the case of Chile, it is clear that sterilized intervention tends to exacerbate capital inflows rather than ameliorate them. This occurs because it tends to increase the differential between domestic and foreign interest rates. Furthermore, sterilized intervention worsens the quasi fiscal deficit of the Central Bank.

5.4 Indonesia

As an oil exporting country, during the 1980s Indonesia suffered a large adverse shock (a drop in its terms of trade) beginning in 1982. As expenditures were not reduced in pace with income, external borrowing increased.[29] In addition to that, as Indonesia's external debt was mostly in the Yen area, the depreciation of the US dollar vis-à-vis other currencies during the second half of the 1980s accounts for a significant increase in Indonesia's total external debt during 1985-87. As a result of these two adverse external shocks, Indonesia's total external debt increased tremendously from 28% of GNP in 1980 to 69% of GNP in 1991.

Mainly because of the increasing indebteness of the country, the government began applying restrictive monetary and fiscal policies in 1986. Although these policies were quite effective in reducing the debt burden, which dropped about 10 percentage points of GNP from 1987 to 1989, total

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28 Many other minor actions were also used during this period to deal with the excessive foreign reserve accumulation. For details see Carrasquilla (1993), and Cárdenas y Barrera (1993).

29 It is important to note that the fiscal accounts did not deteriorate significantly until after 1985. Also, while expenditures did not adjust as fast as income, it was still the fastest adjustment of all oil-exporting countries.

indebtedness began increasing thereafter mainly because of private borrowing.[30] This pattern has forced the government to keep applying restrictive policies in order to avoid major macroeconomic imbalances.

Although tight monetary and fiscal policies had been applied since 1986, during the first half of 1990 an expansionary monetary policy was followed by Bank Indonesia (BI) in order to push down domestic interest rates. Given the open capital account and the financial sector reforms of previous years --that led to a rapid growth of monetary aggregates during 1988-90-- the policy was not very effective as international reserves began to fall and the current account balance deteriorated. This outcome forced the government to reverse its policy as the economy was beginning to boom and overheat. (Inflation accelerated and the current account balance worsened during 1990-91).

Notwithstanding, during 1990/91 and 1991/92 the government has made a concerted effort to curb aggregate demand and slow the expansion in borrowing. This has been done through improved incentives for non-oil exports, continued appropriate and responsive exchange rate policy, responsible monetary policy which reduced the growth in domestic credit, restrained fiscal policy and cautious public and semi-public investment programs. Several specific measures have been implemented by the Indonesian monetary authorities since mid 1990 to limit monetary growth. Some of them are the following:

- They forced a large transfer (equivalent to 25% of base money) of public enterprise deposits in the banking system to papers issued by BI.
- They imposed limits to the use of BI swap facilities as a currency hedge to avoid excessive borrowing from abroad.
- They imposed limits on commercial bank's external borrowing and foreign currency exposure.
- They imposed limits (in the form of annual ceilings) on the external borrowing of public enterprises.
- They raised the interest rate on BI certificates by 4%.
- They raised banks' capital/asset ratio, which was scheduled to reach 8% by end 1993.
- They have also tried the sterilization of capital inflows through open market operations.

In addition to using monetary policy, some measures were taken to reduce aggregate demand by restraining public expenditure. In late 1991, a ministerial level team was established to supervise public and quasi-public sector borrowing and investment. This commission deferred the implementation of several large public and public related investment projects. Also, in early 1993 the subsidies to most fuel products were eliminated.

The outcome of the reforms and policies mentioned above was an improved current account balance and lower inflation in 1992. Also, the overall public sector balance shows an improving trend since 1988, while interest rates increased in late 1990/early 1991 and began decreasing thereafter.[31]

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30 The private over total debt ratio has increased from about 17% in 1987 to about 34% in 1991.

In sum, despite the large external debt and the constraints that it imposes on the Indonesian economy, the country has been able to keep growing while the annual inflation rate has remained fairly stable and at moderate levels during most part of the last decade. Overal, Indonesia's economic authorities have been able to avoid major imbalances despite the limited room they have to maneuver. In part this has been the result of pursuing sound exchange rate, fiscal and monetary policies. Also, they have shown their willingness to implement the required adjustment policies whenever necessary.

5.5 Korea

Although the capital account in Korea remains partially closed, it has been progressively liberalized since 1984 when direct foreign investment was freed. In 1984 direct portfolio investment by foreigners was also partially liberalized.[32] In 1992 the direct purchase of Korean stocks by foreign investors was further liberalized, although some restrictions still apply. Following the 1984 and 1992 reforms, capital flows into Korea have increased significantly, and particularly so in the last two years. The recent flows have come mostly in the form of DPI[33]. However, the potential problems caused by these capital inflows are not new to the Korean economy, since starting in 1986 and until 1988 and mainly due to the economic recovery of the industrialized countries, Korea showed significant current account surpluses that created the same kind of problems that an increase in capital inflows does, namely excess liquidity, upsurge inflation, and an appreciation of the real exchange rate. During this period the stock of international reserves jumped from US$ 3.3 billion (in 1986) to US$ 16.6 billion (in 1992).

Since 1986, the government and the Bank of Korea have attempted to minimize the effects of the increased liquidity in the economy by increasingly implementing sterilized intervention and paying out foreign debt. Thus, the stock of outstanding government securities increased almost 20 times in real terms from end-1985 to end-1987, and almost doubled between end-1987 and end-1989 (also in real terms). Since then it has remained stable.[34]

On the other hand, foreign debt (as a percentage of GNP) has fallen systematically during the second half of the 1980's and the beginning of the 1990's. This is particularly so for the case of long term public (or publicly guaranteed) foreign debt. Thus, as a percentage of GNP by end 1991 total foreign debt had fallen to one third of its 1985 level, while long-term public and long term private foreign debt had fallen to one fourth and one half of their 1985 levels, respectively.

Nevertheless, in recent years inflation has increased --from less than 3% on an annual basis in 1985, to almost 10% in 1991, and 6.2% in 1992-- while the real exchange rate has appreciated by 40% (approximately) during the same period.[35] An explosion in nominal wages, following the transition to democracy, has been one of the causes of the acceleration of inflation.[36] As a result the international

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31 See Trends in Developing Economies, Vol. 2, The World Bank (1993), and Indonesia, Sustaining Development, The World Bank (1994).

32 After 1984 foreigners were allowed to invest in Korean stocks through investment funds, and Korean companies were allowed to raise capital through equity-link bonds.

33 The opening of the stock market for foreign investors in 1992 meant a capital inflow of nearly US$890 millions during the first quarter of the year alone.

34 The stock of government securities includes T-bills, Foreign Exchange Stabilization Bonds, and Monetary Stabilization Bonds. (Source: The World Bank).

35 The RER is measured as the ratio between the nominal exchange rate and the CPI.

36 Nominal Wages and the CPI increased 156% and 43% between 1985 and 1991 respectively.

competitiveness of the Korean manufacturing sector has fallen more than 50% in the same period, mainly because of a significant increase in wages.[37]

This outcome is also the result of two different elements. First, in spite of having a quite open current account, the Korean authorities have failed to reduce the share of non-tradable goods in total expenditure as the investment in housing and other infrastructure projects has increased (construction has grown very fast during 1989-92). Second, despite of increasingly using open market operations to reduce the increase in liquidity that results from the balance of payments surpluses, the Korean authorities have not been very successful in keeping monetary aggregates from growing, mainly because of the lack of a large and deep market for government securities. Monetary aggregates keep growing also because of the continued subsidized credit allocation policy applied by the government. From 1986 to 1991, M1, M2 and M3, all measured as a percentage of GNP, have increased from 10%, 37% and 79%, to 11%, 41% and 118%, respectively.

5.6 Malaysia

Beginning in 1986, Malaysia received a large capital inflow --mainly in the form of direct foreign investment-- and during 1991-92 the surplus in the capital account has been above 10% of GDP (see table 11 below). This has occurred despite the large stock of foreign debt which Malaysia accumulated during the early 1980s and which reached a peak in 1986. Nevertheless, sound economic policies introduced since 1982 have been effective in attracting foreign investors to the country.

Also during this time period the country has maintained a managed float exchange rate system, where the Central Bank intervenes only to avoid excessive variability of the value of the Ringgit against a basket of foreign currencies. The trade regime as well as the capital account are quite open, particularly so in the latter case. In fact domestic residents and foreign residents, in general, face only minor restrictions when undertaking international transactions.[38]

Surprisingly, after 1985 and despite the capital inflows received from abroad, the authorities have been able to keep inflation at a low level (compared to international standards), interest rates have remained fairly stable, and the real effective exchange rate has been depreciating, increasing the competitiveness of the tradable sector. The real depreciation of the Ringgit since 1985 reached a peak of 34% in 1991 and began appreciating thereafter.

The good performance of the Malaysian economy since the 1985-86 recession has been the result of sound economic management. Among the policies that have contributed to this outcome we can single out the following:

First and most important, a large fiscal adjustment. In fact the Malaysian authorities have been able to reduce the overall public sector deficit from 5% of GDP in 1986, to a surplus of 0.4% of GDP in 1992.[39] Also, the increase in public sector saving has allowed the country to prepay its foreign debt at a

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37 Measured as the ratio between the following: the multiplication of the nominal exchange rate and the Industrial Production Index, and the multiplication of the Manufacturing Employment Index and the Wage Index. According to an estimate from the IMF the Manufacturing Unit Labor Cost in Korea increased 46% between 1985 and 1989.

38 The only exceptions to this general rule are transactions with Israel and South Africa. In these two cases and for political reasons both trade and financial transactions are heavily restricted.

39 The deficit-surplus figures account for all expenditures, including gross capital formation and public enterprises.

rate of $ 1-2 billion a year during 1987-90, and in this way it has been a major factor accounting for the successful sterilization of the monetary effects of the inflow of direct foreign investment.[40]

Second, although direct foreign investment has contributed to a sharp increase in the investment rate, absorbing the associated capital inflow mostly into tradable goods, and therefore minimizing the pressure for a real exchange rate appreciation, by intervening in the foreign exchange market the authorities have been able to achieve (until 1991) a real depreciation. The Central Bank has been steadily increasing its holdings of international reserves at an rate of 4.3 percent of GDP a year on average since 1986. By the end of 1992, the stock of international reserves held by the central bank was larger that the country's total foreign debt.

Third, a tight monetary policy has contributed to the sterilization of the monetary effects of the reserve accumulation. This has been implemented by imposing restrictions on financial intermediaries, such as a 1% increase (from 5.5% to 6.5%) in the required reserves ratio of banks and other financial institutions in 1989, and the imposition of stricter conditions for the granting of certain type of consumption credits (such as credit cards and motor vehicles purchase loans) in 1992. In addition to this, the Central Bank has been increasingly involved in money market operations to sterilize the higher liquidity caused by the capital inflows.

Finally, a further liberalization of the economy in both, the current account and the capital account, has been implemented. In fact, during this time period the government eased the guidelines for foreign investment in the country (1986) and lifted some of the restrictions affecting domestic borrowing by non-residents (1987 and 1989). They also implemented selective import tariff reductions in 1989-90 and a substantial import duties reduction package was announced for 1993. These policies served to alleviate some of the pressure of the capital inflows in the domestic market by easing the increase in imports.

In sum, like in the case of Indonesia, a sound macroeconomic management with a low fiscal deficit appears to be the most relevant aspect in the case of Malaysia. During the private sector led recovery after 1985 it has been important to restrain public sector expenditures to attract foreign investment to the country, as well as to make space in aggregate expenditures for the increase in investment without the need to squeeze exports.

5.7 Mexico

After the debt crisis in 1982, Mexico spent the rest of the decade stabilizing its economy and adjusting its policies and institutions to achieve sustainable growth. In this process a comprehensive heterodox stabilization program was put in place in December 1987. As part of this program, the primary surplus increased by about 3 percentage points of GDP between 1987 and 1989, while the economic balance of the fiscal sector (which includes interest payments) steadily improved from a deficit of 14.4% of GDP in 1987, to a surplus of 1.6% in 1992. Initially, and for a short period of time, the exchange rate was fixed. Later on, at the end of 1988, a rate of crawl at a decreasing nominal rate was established.[41] In November 1991, an explicit exchange rate band system was announced, which

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40 Total public sector long-term and medium-term debt, as a percentage of GDP, fell to half between 1987 and 1990.

41 This rate has been adjusted downwards three times. Initially it was one peso a day, then it was reduced to 0.80 of a peso a day, then 0.40 of a peso a day, and in November 1991 it was reduced to 0.20 of a peso a day.

meant a shift in the exchange rate policy away from the earlier goal of converging to a fixed exchange rate; the new goal is to have a band of reasonable width.[42]

At the same time, a trade reform was implemented which comprised the elimination of most non-tariff impediments to trade and a significant drop in the average tariff rate --the latter fell from 27 percent in 1982, to 22 percent in 1986, and further to 13 percent in 1992. During the same time period the tariff dispersion fell from 24.8% in 1982, to 14.1% in 1986, and further to 4.5% in 1992. Also, the percentage of imports (value) subject to import permits dropped from 100% in 1983 to only 13.7% in 1990. There have also been major changes in domestic regulation and in the transformation of the public sector, including the privatization of a large number of public enterprises.

The improvement in Mexico's economic prospects due to the reforms, together with the drastic reduction in US interest rates, have encouraged a substantial increase in the level of capital inflows in recent years. Portfolio investment increased from around 400 million dollars in 1989 to 14 billion dollars in 1992. (See Table 7 below.)

To reduce the inflationary pressure and the real exchange rate appreciation of capital inflows, and given the targets in terms of monetary expansion set by the Mexican authorities, the latter decided early on in 1990 to sterilize the monetary effects of capital inflows. Also, the increase in public savings allowed the central bank to reduce the net domestic credit to the government and helped to create a space in aggregate expenditures for the expansion of the private sector expenditures that was emerging from the increased capital inflows.

These policies were also supplemented by open market operations to reduce both the volatility and the level of the expansion in liquidity resulting from these inflows. For this purpose the government has created treasury bonds indexed to the exchange rate (tesobonos), and to the consumer price index (ajustabonos). The sterilization was also carried out through a contraction in the net domestic credit of the central bank.

Furthermore, since October 1992 the exchange rate policy has been modified by widening the band between the official buying and selling points.[43, 44] By depreciating on a daily basis the ceiling of the exchange rate band, that is the selling rate, while holding fixed the buying rate, the size of the band has been increasing. At the present time the ceiling of the band depreciates at a rate of 0.4 of a peso a day. With the current policy, by the end of 1993 the ceiling rate was about 9% above the floor rate, and by the end of 1994 it will be about 14% above the floor rate.

Because capital inflows continued at a large pace, which implied a very large growth of monetary aggregates, the authorities decided to take some additional measures. In an attempt to limit the foreign exchange exposure of domestic banks, indirect restrictions to capital inflows were introduced in early 1992. In April 1992 the Banco de Mexico restricted the foreign currency liabilities of commercial banks

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42 Starting in October 1992, the ceiling of the exchange rate band began to be depreciated by 0.40 pesos per day, while the floor of the band was kept fixed.

43 By widening the band, the exchange rate risk faced by foreign investors seeking short-term gains will increase. See previous footnote.

44 Although the official buying and selling rates may be the floor and ceiling of the band, no transaction takes place at these rates in reality. Instead, there is an inter-bank market which operates within the band, with actual buying and selling taking place at this rate (with just a very narrow market-determined spread to cover transaction costs).

to 10% of their total liabilities.[45] The authorities also introduced a 15 percent reserve requirement on all the borrowing from abroad denominated in foreign currency. Then, in November of the same year, the former restriction was changed by allowing commercial banks to raise foreign currency deposits for specific uses for up to 20% of their total liabilities. This change was designed not to increase the foreign exchange exposure of commercial banks, although it indirectly allowed for a less restrictive monetary policy.[46] Yet, during the whole period the authorities remained using sterilization as a measure to limit the expansion of monetary aggregates.

5.8 The Philippines

During the 1980s, a series of structural reforms were undertaken in the Philippines. These reforms were both at the macro and micro level and included the following: (1) a restructuring and partial privatization of government owned banks; (2) a push forward of the trade liberalization by eliminating most quantitative restrictions; (3) the privatization of public corporations; (4) the liberalization of interest rates and deregulation of financial markets; (5) the disbandment of domestic monopolies; (6) a tax reform; and (7) the deregulation of previously controlled domestic prices. Taken together these policies have opened the economy to competition and have corrected many policy-induced internal distortions.

As a result economic growth resumed during 1987-89 while inflation was brought under control to about 10% per year. The consolidated public sector deficit was also reduced from 9% of GDP in 1983 to 5.5% of GDP in 1990, and further to 2.4% of GDP in 1991 and 1.7% in 1992. However, until recent years the sizable deficit of the public sector kept domestic interest rates at a high level. Also, given the high level of indebtedness of the Central Bank of Philippines (CBP) and the high level of domestic interest rates --the CBP accounted for about 55% of the consolidated public sector deficit during 1986-90 [47]-- it has become increasingly difficult for the CBP to implement monetary policy.

Nevertheless, since 1990 the CBP has been issuing substantial amounts of its own domestic securities to counteract the increase in liquidity that is caused by the surge in capital inflows of recent years. Consequently, the CBP has been able to purchase a net amount of over US$ 3 billion since January 1991. Also the government has helped to sterilize some of the increase in liquidity by issuing T-bills and using the proceeds to make a deposit with the CBP. Thus, given the limited room of maneuver for the CBP, since 1989 monetary policy has also been managed by the National Government by means of transfers to the CBP in the form of deposits, although at a cost of increasing domestic interest rates and worsening the CBP balance.[48] In addition, the CBP has also increased the reserve requirements (RRs) of banks. In 1990, RRs were increased by 4 percentage points to 25%.

Other policies implemented in the Philippines are the following:

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45 Interpreted as an attempt to reduce the exchange risk exposure of domestic banks, this policy would have only an indirect (negative) effect on capital inflows.

46 It is important to note that those banks with existing dollar exposures above the limits (10% initially, then up to 20%) did not have to reduce the nominal dollar amount of their liabilities. Rather, they were allowed to hold them steady until their total portfolio grew sufficiently that they would meet these limits. This is important as most of the largest banks were above the limits to begin with, so it in effect amounted to a freeze on further liabilities.

47 Since 1986 the losses of the CBP have been about 2% of GDP.

48 This CBP financial problem has recently been addressed by the authorities through restructuring of the CBP. Non-viable assets were carved out for eventual liquidation and the CBP itself received resources in the form of T-Bills so that it can maintain positive net income and carry out monetary policy independent of the National Government.

(1) In 1988, the government completed a previous program requiring the elimination of all quantitative restrictions on imports of capital and intermediate goods. In July 1991, another program was issued establishing the gradual reduction of tariffs through June 1995 and simplifying and rationalizing the tariff code.[49]

(2) In 1991, the Foreign Investment Act liberalized the environment for foreign investment in the Philippines.

(3) In September 1992, the government also took several extraordinary steps to deregulate the foreign exchange market by allowing exporters to retain up to 100% of their revenues and eliminating all the restrictions on the use of foreign currency for both current and capital account transactions.

The case of the Philippines, like the case of Argentina, is a difficult one to evaluate, mainly because the policies being applied are very recent. However, the inflation rate increased slightly during 1988-1992, while the real exchange rate appreciated by 14%.[50] Overall, in spite of the very little room for both monetary and fiscal policy (specially the former), the ongoing stabilization program reduced inflation in 1992 and built up international reserves. The current account deficit clearly shows that the external trade balance has been the most affected by the surge of capital inflows in the Philippines, with a worsening of the deficit of eight percentage points of GDP during 1988-1992. This also shows the effectiveness of the liberalization of the foreign trade regime in recent years.

5.9 Thailand

Beginning in 1986, Thailand's economic growth has been very impressive compared with almost any country worldwide, averaging 11% on an annual basis during 1986-90. The growth in 1991 and 1992 has been slightly lower than in the previous years, reaching 8% and 7.5% respectively, which in part can be explained because of the tight fiscal and monetary policies being pursued in Thailand during 1988-91 and their effects on private domestic demand.[51]

The main reasons explaining Thailand's economic growth are the increase in private investment and the increase in manufacturing exports. Gross investment as a percentage of GDP rose 17 percentage points between 1986 and 1991. In particular, Thailand has benefited from a surge in foreign direct investment from Japan and other Asian NIEs and from an increase in foreign trade in the region. The flow of foreign capital to Thailand for the last five years has been on average higher than 10% of GDP and has been originated by private demand. The surge in exports is explained by both, the abolition of export taxes in 1985 and the depreciation of the Baht in 1984.

In recent years, the fiscal balance has moved from a deficit of 5% of GDP in 1984-85 to a surplus of 5% of GDP in 1989-90. The turnaround in the fiscal accounts resulted from both, an increase in tax revenues and a reduction in expenditures, although the latter has been more important than the former.

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49 However, a temporary import surcharge of 9% was introduced in 1991 as a way to balance the fiscal deficit due to the poor response of tax revenues to the tax reform. This surcharged was discontinued after one year.

50 Notice that because of the cyclical behavior of both indicators, the results are very different if we consider the period starting in 1986 instead. However, given the size of the capital flows to Philippines, the 1988-92 period seems more relevant to evaluate.

51 The overall public sector balance, measured in percentage points of GDP, increased from a surplus of 1.3% in 1988, to 4.1% in 1989, 4.7% in 1990, and 3.0% in 1991 (fiscal year ending September 30). Source: IMF. Other reasons also help to explain the slowdown in economic growth during 1991 and 1992 in Thailand (see the latest paragraph in this section).

From the beginning of the 1980s to the end of the decade total revenue increased by about 4% of GDP and total expenditures fell by about 5% of GDP.[52]

In addition to the substantial tightening of fiscal policy, Thailand's economic authorities implemented a series of other measures to reduce domestic aggregate demand and to counteract the increase in money growth and the excess liquidity that was being caused by the capital inflows. The policies implemented comprise the following:

- Further liberalization of capital outflows. In April 1991, the capital account was further liberalized by allowing domestic residents to take abroad up to US$ 5 millions for investment purposes and to open foreign currency accounts with commercial banks in Thailand.

- Sterilization of monetary impulses. Because of the large capital inflows to Thailand --which in 1989 exceeded in value the stock of reserve money at the start of the year-- the Central Bank has implemented open market operations to absorb liquidity. This has been implemented by the Bank of Thailand issuing its own bonds, in addition to the deposits by the Treasury with the Central Bank implied by the fiscal surpluses of recent years.

- Reduction of trade barriers. A significant progress in furthering import tariff reform has been made for the past years. In October 1990, tariffs on capital goods used in manufacturing were reduced from 20% to 5% and all existing exemptions or reductions of tariffs were abolished. As a result the average import duty rate has fallen from 14% in 1986 to 9% in 1991.

- Imposition of taxes in foreign borrowing. In March 1990, a 10 percent withholding tax on interest paid on foreign loans was restored after two years of being suspended.

- Tightening of monetary policy. The authorities imposed "voluntary" limits on commercial bank's lending to "non-productive" activities such as consumer loans, mortgages and the construction of luxury condominiums, etc. Also, in 1989 the Central Bank's refinancing facility, that promotes priority sectors development by lending at preferential interest rates, began to reduce the total amount of refinancing and to increase its rediscount interest rate.

The outcome that resulted from all the policy measures mentioned above is impressive, not only in terms of the high rate of economic growth observed in Thailand in the past six years, but also in terms of the low inflation rate and the fairly stable real exchange rate.[53] In fact the inflation rate, although increasing between 1986 and 1991, still remains at a low level by any international standard and seems to have stabilized after falling more than one-and-a-half percentage point from its 1991 level.

The most outstanding result in the case of Thailand concerns its international competitiveness, as measured by the real exchange rate, which has remained fairly stable. In fact it remained almost constant from 1986 to 1990 and began appreciating thereafter. Nonetheless the accumulated appreciation during 1990-92 has been less than 9%.

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52 It should be pointed out that the consolidated public sector balance deteriorated in recent years, going from a surplus of about 4% of GDP in 1991, to a surplus of only 1% of GDP in 1992, and further to a deficit of about 1% of GDP in 1993 (fiscal year ending September 30). Source: IMF. This was due to both, a decrease in total revenues and grants and an increase in public sector expenditures. (See the latest paragraph in this section).

53 The RER appreciated less than 5% during 1986-1990. See the discussion in section 6 below.

It is worth noticing that the results observed in Thailand could have been different had not the economic authorities decided to ease monetary policy and to expand public expenditures beginning in late 1991. In fact, as a response to the slowdown in external demand that resulted from the slowdown in economic activity in the developed countries in recent years, and to counteract for the lower capital inflows that resulted from the Middle East crisis in 1990-91 and the political problems in Thailand during 1991-92 --that affected negatively private investment and consumption--, public expenditures in Thailand increased by more than 2 percentage points of GDP between 1990 and 1992.[54] This recent increase in public expenditures also resulted from the need to solve the bottlenecks in infrastructure that developed during the fast growing period (1987-90). Also monetary policy was eased in September 1991 when the Bank of Thailand lowered its discount rate by 1 percentage point.

6. Economic Policy: Some Lessons

The countries analyzed in this paper have implemented different policies to compensate for the monetary and real effects of the surge in capital inflows of recent years. The outcome has been different for each country and the degree of success varies among them. In this section we attempt to summarize the most important findings by comparing the nine country experiences. Table 10 below shows the different policy-mix used by each of the countries included in the sample, while tables 11 and 12 summarize the outcome in some key macroeconomic variables for all the countries in the sample.

Concerning the outcome in each of the countries there are some important general facts that are worth noticing.

- First, it can be argued that all the countries have been successful in avoiding a permanent and significant increase in inflation. In fact, in Argentina and Mexico inflation has been decreasing for the past three to four years, while in the other seven countries inflation has remained fairly stable. Although in the case of Malaysia inflation seems to be increasing during the last two years, it is also true that Malaysia shows the lowest inflation rate among all of the countries in the sample.

- Second, in terms of the pattern shown by the real exchange rate, we can split our sample into two different groups. In the first group we include Chile, Indonesia, and Malaysia, which have avoided a significant real exchange rate appreciation (Malaysia shows a real depreciation). In the second group we include Argentina, Korea, Mexico, and the Philippines which have had a strong appreciation of the real exchange rate. Thailand lies in between these two groups.

- Third, the countries that have received the largest capital inflows (as a percentage of GDP, see Table 12) on average during 1989-92, are not those that have experienced the largest real exchange rate appreciation. In fact the largest recipients of capital inflows (Thailand, Malaysia and Chile), have experienced either a depreciation or a low appreciation of their currencies. It is important to note that Thailand has experienced a lower appreciation than Korea in spite of receiving a much larger capital inflow. Also, during 1986-90 the RER in Thailand appreciated only 4.8%, and it began appreciating faster in 1991-92 after the government decided to easy monetary and fiscal policy as a response to the slowdown in aggregate demand.

- Fourth, those countries that show a decreasing pattern of government consumption –as a percentage of GDP– are also those that show a lower real exchange rate appreciation (Malaysia, Chile and

[54] Overall public sector expenditures and net lending increased from 19.7% of GDP in 1990, to 20.6% of GDP in 1991, and further to 22% of GDP in 1992 (fiscal year ending September 30). Source: IMF.

Indonesia). It is again important to notice that during 1986-90, the period when Thailand reduced its government consumption by 3.4% of GDP, the RER appreciated only 4.8% in spite of receiving (on average) capital inflows for about 7 percentage points of GDP.

- Those countries that show an increasing share of government consumption in GDP (Argentina, Mexico, Korea and The Philippines) are the same that show the highest real exchange rate appreciation, in spite of not being the largest recipients of capital inflows.

Overall, the sample studied in this paper does not provide strong evidence to suggest that there is a clear regional difference in the way countries have responded to the surge of capital inflows in recent years. However it could be argued that, with the exception of Chile in Latin America, and Korea and the Philippines in East Asia, countries in the latter region have tended to rely more on a restrictive fiscal policy than countries in Latin America.

In addition, some less general (i.e., more country specific) conclusions in terms of economic policy can be drawn from the cases studied in this paper.

First, the experiences of Chile and Colombia clearly illustrate the difficulties that a country faces in the more integrated and global capital markets of the 1990s, when it wants to follow a restrictive monetary policy while at the same time pursuing an inflation and a real exchange rate target. What these two experiences show is that sterilized intervention tends to exacerbate capital inflows rather than to ameliorate them. This occurs because it tends to increase the differential between domestic and foreign interest rates. Furthermore, as the experience in The Philippines also shows, sterilized intervention worsens the quasi fiscal deficit of the Central Bank.

Second, by contrasting the experiences of Indonesia, Malaysia, and Thailand against those of Colombia, Korea, Mexico and the Philippines, one can argue that sterilized intervention is most effective when it is accompanied by fiscal restraint. The main policy responses in the former countries were a substantial tightening of fiscal policy and sterilized intervention, while in the latter group of countries the fiscal adjustment was less severe.

Third, by comparing the experiences of Thailand and Malaysia in the mid-1980s against those of Argentina and The Philippines more recently, it seems possible to argue that in spite of the favorable evolution of both tax collection (increasing) and public spending (decreasing) in the latter group of countries, a significant effort in cutting public expending remains to be done. The persistence of the overall public sector deficit seems to be an obstacle to achieve a higher RER and higher economic growth.

7. Summary and Final Remarks

During the last five years there has been an increasing interest in investors from industrial countries in investing in developing countries, particularly in those that have stabilized their economies and that have carried out major reforms of their policies and institutions, opening up their economies to international competition, increasing the reliance on market signals, and decreasing the role of the state in the production of private goods. The better prospects of the recipient countries and the lower level of interest rates in the international markets have contributed to this change.

The increase in capital inflows to developing countries has relieved the balance of payments constraint of the recipient countries, but at the same time has created some new problems. These new

problems are mainly two: an increase in monetization and inflation, and a real exchange rate appreciation. Concerning the nine country experiences analyzed in this paper, some general remarks are in order.

First, there is a role for the Central Bank to play in order to avoid some of the side effects of capital inflows.

Second, to get the benefits of capital inflows while at the same time ameliorating some of their side effects, a tight fiscal policy seems to be the most effective policy to avoid a large appreciation of the real exchange rate. Those countries that increased their public savings were able to leave more space for the increase in private sector investment that was being financed by the capital inflow.

Third, the increase in public sector savings seems to be the only sustainable policy to protect the real exchange rate in the long run and seems to be perceived more favorably by the international investors community.

Fourth, a mixed fiscal/monetary policy seems to be more appropriate in the short run than pure fiscal policy. This occurs because fiscal policy usually lacks the required flexibility to deal with volatile capital flows in the short run. However, the high volatility of portfolio investment flows imposes a medium- and long-term constraint in terms of keeping fiscal policy aligned with fundamentals.

Fifth, the use of sterilized intervention has shown not to be very effective as a mechanism to protect the real exchange rate from appreciating, especially in the long-run. Although this policy may work in the short-run, the increase in domestic interest rates that goes along with it provides additional incentives for capital inflows. Finally, this policy is not sustainable in the long run because it has shown to worsen the quasi-public deficit of the Central Bank. The latter may be the source of speculative attacks on the exchange rate.

Sixth, letting domestic interest rates fall to levels consistent with the expected depreciation-augmented international interest rates, seems to be necessary to reduce the inflows of capital. As the experiences of Colombia and Indonesia show, letting the domestic interest rate adjust reduces the incentives for capital inflows and eliminates the quasi-fiscal losses of the Central Bank. The aggregate demand effects of the lower interest rate needs to be dealt with through a fiscal adjustment.

Seventh, the impediments to capital inflows by imposing quantitative constraints or ceilings on foreign borrowing by banks or other large borrowers (large enterprises), or the sterilization through the purchase of Central Bank's liabilities by large investors (pension funds or public enterprises), proves to be effective in the short run as long as it does not cause an increase in domestic interest rates and additional capital inflows. However, given the worldwide integration and globalization of financial markets and the sophistication of financial intermediaries, this sort of policy does not seem to be effective in the long run. Also, this type of constraints may be very damaging to the economy as a whole because of its related pervasive effects on resource allocation and efficiency, and most probably it will have negative effects on the total amount of capital inflows to the country as it may be perceived negatively by international investors.

In sum, capital inflows not only allow the benefit of a relaxation of a balance of payments constraint, but also could create some macroeconomic adjustment problems. In this sense capital flows to developing countries, if properly handled, can be both the result and the cause of high economic

growth. However, a poor economic policy management in the recipient country may cause a reversal of flows rather than enhancing their continuance. The use of the appropriate policy tool may be crucial to attain a sustainable and higher rate of growth and investment. The only sustainable policy to use seems to be fiscal policy, not only because of the highly integrated financial markets around the world, but also because monetary policy becomes less effective whenever there is a nominal exchange rate target. This is particularly true for those flows that are highly volatile such as private portfolio investment. For capital inflows of a more long-term characteristic, the authorities should be ready to allow the adjustment mechanism to work through a real appreciation. In this case a fiscal adjustment could accompany the capital inflow to reduce the size of the required appreciation and or to distribute the real appreciation through time.

References

Bank Negara Malaysia, *Annual Report*, several issues.

Calvo, G. and C. Rodriguez (1977), "A Model of Exchange Rate Determination Under Currency Substitution and Rational Expectations". Journal of Political Economy, Vol. 85, No 3, April.

Calvo, G., L. Leiderman, and C. Reinhart (1993a), "The Capital Inflows Problem: Concepts and Issues". Processed, June.

Calvo, G., L. Leiderman, and C. Reinhart (1993b), "Capital Inflows to Latin America: The Role of External Factors". IMF Staff Papers, 40, pp 108-51.

Cardenas, M. (1993), "Flujos de Capitales y Mecanismos de Estabilizacion en Colombia". In Garay, J. and M. Cardenas (editors), Macroeconomia de los Flujos de Capital en Colombia y America Latina. Bogota, Fedesarrollo, Tercer Mundo, and FESCOL.

Cardenas, M. and F. Barrera (1993), "Efectos Macroeconomicos de los Capitales Extranjeros: El Caso Colombiano", Documento de Trabajo No 147, IDB, Washington, D.C.

Carrasquilla, (1993), "Acumulacion de Reservas y Politica Macroeconomica: Colombia: 1990-1992". In Garay, J. and M. Cardenas (editors), Macroeconomia de los Flujos de Capital en Colombia y America Latina. Bogota, Fedesarrollo, Tercer Mundo, and FESCOL.

Claessens, S., M. Dooley, and A. Warner (1993), "Portfolio Capital Flows: Hot or Cool?". In Claessens, S. and S. Gooptu (editors), Portfolio Investment in Developing Countries, World Bank Discussion Papers 228, The World Bank, Washington D.C.

Cheng, H., ed., (1986), Financial Policy and Reform in Pacific Basin Countries. Lexington Books, Lexington, Massachusetts.

Cho, Y. and D. Khatkhate (1989), "Lessons of Financial Liberalization in Asia, A Comparative Study". World Bank Discussion Papers, 50, The World Bank, Washington D.C.

Collins, S. and Won-Am Park (1989), " External Debt and Macroeconomic Performance in South Korea". In J. S. Sachs and S M. Collins (editors), Developing Country Debt and Economic Performance, Volume 3. Chicago and London, University of Chicago Press for the NBER.

Corbo, V. (1993), "Economic Reforms in Chile: An Overview". Paper presented at the Eastern Economic Association Meeting, Washington, D.C., March.

Corbo, V. and L. Hernández (1993), "Macroeconomic Adjustment to Portfolio Capital Inflows: Rationale and Some Recent Experiences". In Claessens, S. and S. Gooptu (editors), Portfolio Investment in Developing Countries, World Bank Discussion Papers 228, The World Bank, Washington D.C.

Corbo, V. and S. Fischer (1993), "Lessons from the Chilean Stabilization and Recovery". In B. Bosworth, R. Dornbusch, and R. Laban (editors), The Chilean Economy Policy Lessons and Challenges. Washington, Brookings.

Corbo, V. and Sang-Woo Nam (1992), "Recent Evolution of the Macroeconomy: Korea". In V. Corbo and Sang-Mok Suh (editors), Structural Adjustment in a Newly Industrialized Country. The Korean Experience. Baltimore and London, Johns Hopkins University Press.

Corden, W. M. (1984), "Booming Sector and Dutch Disease Economics: Survey and Consolidation". Oxford Economics Papers, 36, November.

Corden, W. M. (1990), "Macroeconomic Policy and Growth: Some Lessons of Experience". Proceedings of the Annual Conference on Development Economics. The World Bank, Washington D.C.

Corden, W. M. and J. P. Neary (1982), "Booming Sector and De-Industrialization in a Small Open Economy". Economic Journal, 92, December.

Dornbusch, R. (1976), "Expectations and Exchange Rate Dynamics". Journal of Political Economy, 84, pp. 1161-1176.

Easterly, W. and K. Schmidt-Hebbel, (1993), "Fiscal Accounts and Macroeconomic Performance". World Bank Policy Research Bulletin, Volume 4, Number 3, May-July.

Edison, H. (1993), "The Effectiveness of Central Bank Intervention: A Survey of the Literature after 1982", Special Papers in International Economics 18 (July).

Faruqui, S., ed.. (1993). Financial Sector Reforms in Asian and Latin American Countries. Lessons of Comparative Experience, . EDI Seminar Series. EDI. The World Bank, Washington D.C.

Frankel, J. A. (1993), "Sterilization or Money Inflows: Difficult (Calvo) or Easy (Reisen)?". Processed, July.

Goldstein, M., D. Folkerts-Landau, P. Garber, L. Rojas-Suarez and M. Spencer (1993), "International Capital Markets Part I. Exchange Rate Management and International Capital Flows". World Economic and Financial Surveys, IMF, Washington D.C., April.

Goldstein, M., D. Folkerts-Landau, M. El-Erian, S. Fries and L. Rojas-Suarez (1992), "International Capital Markets, Developments, Prospects, and Policy Issues". World Economic and Financial Surveys, IMF, Washington D.C., September.

Gooptu, S. (1993), "Portfolio Investment Flows to Emerging Markets". In Claessens, S. and S. Gooptu (editors), Portfolio Investment in Developing Countries, World Bank Discussion Papers 228, The World Bank, Washington D.C.

Husain, I. and K. W. Jun (1992), "Capital Flows to South Asian and ASEAN Countries". WPS 842, The World Bank, Washinton D.C., January.

International Monetary Fund, *International Financial Statistics*, several issues.

International Monetary Fund, *Balance of Payments Statistics*, several issues.

International Monetary Fund (1992), "Private Market Financing for Developing Countries". World Economic and Financial Surveys, IMF, Washington D.C., December.

Labán, R. and F. Larraín (1993), "Can a Liberalization of The Capital Outflows Increase Net Capital Inflows?". Documento de Trabajo, Instituto de Economía, Pontificia Universidad Católica de Chile.

Mathieson, D.J. and L. Rojas-Suarez (1993), "Liberalization of the Capital Account. Experiences and Issues". Occasional Paper 103, International Monetary Fund, Washington D.C.

Mundell, R. A. (1968), International Economics. Macmillan Publishing Company, New York.

Ocampo, J.A. (1992), "La Internacionalizacion de la Economia Colombiana". CLADEI-CIID, processed. Fedesarrollo.

Robinson, D., Y. Byeon, R. Teja and W. Tseng, (1991), "Thailand: Adjusting to Success Current Policy Issues". Occasional Paper 85, IMF, Washington D.C., August.

Schadler, S., M. Carkovic, A. Bennet, and R. Kahn (1993), "Recent Experiences with Surges in Capital Inflows". IMF Occasional Paper 108, IMF, Washington DC, December.

The World Bank (1994), Indonesia. Sustaining Development, A World Bank Country Study, The World Bank, Washington D.C.

The World Bank (1993), Trends in Developing Economies, Vols. 1 and 2. The World Bank, Washington D.C.

The World Bank (1992a), World Debt Tables 1992-93. The World Bank, Washington D.C.

The World Bank (1992b), "Korea, Managing the Industrial Transition", volumes I and II. A World Bank Country Study, The World Bank, Washington D.C.

The World Bank (1990), "Argentina: Tax Policy for Stabilization and Economic Recovery". A World Bank Country Study, The World Bank, Washington D.C.

The World Bank (1989), "Malaysia, Matching Risks and Rewards in a Mixed Economy". A World Bank Country Study, The World Bank, Washington D.C.

Thomas, V.et. al. (1990), "Lessons on Trade Policy Reforms". Policy and Research Series, 10, The World Bank, Washington D.C.

Tseng, W. and R. Corker (1991), "Financial Liberalization, Money Demand, and Monetary Policy in Asian Countries". Occasional Paper, 84, IMF, Washington D.C., July.

Williamson, J. (1993), "Issues Posed by Portfolio Investment in Developing Countries". In Claessens, S. and S. Gooptu (editors), Portfolio Investment in Developing Countries, World Bank Discussion Papers 228, The World Bank, Washington D.C.

TABLE 1

A : MACROECONOMIC INDICATORS

ARGENTINA	1986	1987	1988	1989	1990	1991	1992
AVERAGE INFLATION (%)	90.10	131.33	342.95	3079.42	2313.97	171.67	24.90
REAL EFFECTIVE EXCH. RATE ('85=100) (1)	121.88	123.29	121.47	81.44	135.86	222.15	266.97
RESERVE MONEY (L.c. $ MILLIONS)	0.69	1.35	7.00	528.17	3617.00	7823.00	11010.00
- NET DOMESTIC CREDIT	0.97	3.38	11.75	n.a.	5360.00	8916.00	2617.00
- NET FOREIGN ASSETS	-0.27	-2.03	-4.75	n.a.	-1743.00	-1093.00	8393.00
INVESTMENT (%GDP) (2)	17.46%	19.55%	18.64%	15.51%	14.00%	14.64%	16.70%
NATIONAL SAVINGS (% GDP) (2)	n.a.	15.70%	17.90%	13.60%	15.50%	13.20%	13.00%
- PRIVATE CONSUMPTION (% GDP) (2)	n.a.	75.30%	73.80%	73.50%	71.90%	75.00%	75.50%
- GOVERN'T CONSUMPTION (% GDP) (2)(3)	n.a.	4.90%	4.30%	4.50%	8.40%	8.80%	9.40%
CURRENT ACCOUNT DEFICIT (% GDP) (2)	n.a.	3.85%	0.74%	1.91%	-1.50%	1.44%	3.65%

B: BALANCE OF PAYMENTS SELECTED DATA
(In millions of dollars)

ARGENTINA	1986	1987	1988	1989	1990	1991	1992
RESERVES: NET CHNG IN HLDGS (4)	984	2213	-1922	1322	-3092	-1977	-4250
SHORT TERM CAPITAL	-725	-283	609	-5273	-3267	1053	8198
LONG TERM CAPITAL	2066	2574	737	1101	679	970	22
PORTFOLIO INVESTMENT	-365	-96	-656	2618	-1309	461	-754
NET DIRECT INVESTMENT	574	-19	1147	1028	1836	2439	4179
CAPITAL ACCOUNT BALANCE	1550	2176	1837	-526	-2061	4923	11645
NET ERRORS AND OMISSIONS	302	-112	-165	-249	715	-341	137

Sources: IMF, International Financial Statistics
IMF, Balance of Payments Statistics
World Bank
Situacion Latinoamericana

Notes: (1) An increase in the index is an apreciation of the RER
(2) Computed at current prices.
(3) 1987-1989 includes federal government only.
1990-92 includes both federal as well as provincial governments.
(4) A negative number means an increase in reserves.

TABLE 2

A : MACROECONOMIC INDICATORS

CHILE	1986	1987	1988	1989	1990	1991	1992
AVERAGE INFLATION (%)	19.48	19.87	14.69	17.03	26.04	21.78	15.43
REAL EFFECTIVE EXCH. RATE ('85=100) (1)	84.52	78.43	73.35	75.01	72.84	75.15	79.5
RESERVE MONEY (L.c. $ MILLIONS)	2317443	2492480	2400394	2321690	3675395	4507409	5238266
- NET DOMESTIC CREDIT	2846763	3198490	2737820	2206783	2539786	2750800	2271891
- NET FOREIGN ASSETS	-529320	-706010	-337426	114907	1135609	1756609	2966375
INVESTMENT (%GDP) (2)	18.88%	22.24%	22.77%	25.53%	24.73%	22.15%	23.74%
NATIONAL SAVINGS (% GDP) (2)	11.54%	17.25%	22.27%	23.68%	22.47%	22.32%	22.01%
- PRIVATE CONSUMPTION (% GDP) (2)	65.48%	64.00%	59.91%	60.41%	62.47%	63.53%	64.56%
- GOVERN'T CONSUMPTION (% GDP) (2)	12.58%	10.88%	10.36%	9.60%	9.60%	9.69%	9.73%
CURRENT ACCOUNT DEFICIT (% GDP) (2)	7.34%	4.99%	0.50%	1.85%	2.32%	-0.17%	1.73%

B: BALANCE OF PAYMENTS SELECTED DATA
(in millions of dollars)

CHILE	1986	1987	1988	1989	1990	1991	1992
RESERVES: NET CHNG IN HLDGS (3)	255	-79.2	-867	-581	-2320	-1340	-1950
SHORT TERM CAPITAL	377	172	-208	742	1143	-212	1712
LONG TERM CAPITAL	26	-74	299	-916	1094	378	506
PORTFOLIO INVESTMENT	197	693	870	1400	766	93	-14
NET DIRECT INVESTMENT	116	230	141	184	249	563	737
CAPITAL ACCOUNT BALANCE	716	1020	1100	1410	3250	822	2940
NET ERRORS AND OMISSIONS	224	-77.7	-109	-71.3	-326	283	187

Sources: IMF, International Financial Statistics
IMF, Balance of Payments Statistics
Central Bank of Chile

Notes: (1) An increase in the index is an apreciation of the RER
(2) Computed at current prices
(3) A negative number means an increase in reserves

TABLE 3

A : MACROECONOMIC INDICATORS

COLOMBIA	1986	1987	1988	1989	1990	1991	1992
AVERAGE INFLATION (%)	18.8a	23.30	28.11	25.84	29.14	30.39	27.03
REAL EFFECTIVE EXCH. RATE ('85=100) (1)	74.51	66.44	64.08	61.73	54.46	56.27	61.46
RESERVE MONEY (L.c. $ MILLIONS)	581500	848900	1017600	1694400	2077300	2647700	3619300
- NET DOMESTIC CREDIT	-236430	-150883	-543	307450	-113860	-1088270	-1732270
- NET FOREIGN ASSETS	817930	999783	1018143	1386950	2191160	3735970	5351570
INVESTMENT (%GDP) (2)	18.00%	20.00%	21.99%	19.98%	18.23%	15.26%	17.91%
NATIONAL SAVINGS (% GDP) (2)	20.40%	19.16%	20.29%	19.09%	18.56%	18.38%	15.96%
- PRIVATE CONSUMPTION (% GDP) (2)	65.35%	66.13%	65.50%	65.29%	65.39%	66.05%	64.83%
- GOVERNT CONSUMPTION (% GDP) (2)	9.81%	9.84%	10.08%	10.55%	10.73%	10.63%	10.39%
CURRENT ACCOUNT DEFICIT (% GDP) (2)	-2.40%	0.83%	1.70%	0.88%	-0.33%	-3.12%	1.95%

B: BALANCE OF PAYMENTS SELECTED DATA
(in millions of dollars)

COLOMBIA	1986	1987	1988	1989	1990	1991	1992
RESERVES: NET CHNG IN HLDGS (3)	-1350	106	-348	-220	-667	-1890	n.a.
SHORT TERM CAPITAL	-1307	-192	105	-175	-198	-926	n.a.
LONG TERM CAPITAL	1793	-150	675	-73	-284	-371	n.a.
PORTFOLIO INVESTMENT	30	48	0	179	-4	81	n.a.
NET DIRECT INVESTMENT	642	293	159	547	484	433	743
CAPITAL ACCOUNT BALANCE	1160	-1	939	478	-2	-783	n.a.
NET ERRORS AND OMISSIONS	-417	67	-530	37	-56	139	n.a.

Sources: IMF, International Financial Statistics
IMF, Balance of Payments Statistics
Latin American Consensus Forecasts
The World Bank
Banco de la Republica

Notes: (1) An increase in the index is an apreciation of the RER
(2) Computed at current prices.
(3) A negative number means an increase in reserves.

TABLE 4

A : MACROECONOMIC INDICATORS

INDONESIA	1986	1987	1988	1989	1990	1991	1992
AVERAGE INFLATION (%)	5.94	9.16	8.04	6.42	7.45	9.40	7.50
REAL EFFECTIVE EXCH. RATE ('85=100) (1)	74.79	79.08	78.31	76.51	75.02	78.08	80.59
RESERVE MONEY (L.c. $ MILLIONS)	8170000	9032000	8381000	10788000	12549000	12961000	15509000
- NET DOMESTIC CREDIT	-70096	-118530	1868380	5757160	925740	-5181137	-15673500
- NET FOREIGN ASSETS	8240096	9150530	6512620	5030840	11623260	18142137	31182500
INVESTMENT (%GDP) (2)	28.27%	31.36%	31.53%	35.19%	36.58%	35.07%	34.63%
NATIONAL SAVINGS (% GDP) (2)	23.18%	28.08%	29.12%	32.69%	32.21%	30.99%	32.56%
- PRIVATE CONSUMPTION (% GDP) (2)	61.70%	57.68%	57.03%	53.09%	53.99%	55.37%	53.04%
- GOVERNT CONSUMPTION (% GDP) (2)	11.03%	9.42%	8.98%	9.39%	8.92%	9.18%	9.64%
CURRENT ACCOUNT DEFICIT (% GDP) (2)	5.08%	3.29%	2.41%	2.49%	4.37%	4.07%	2.07%

B: BALANCE OF PAYMENTS SELECTED DATA
(in millions of dollars)

INDONESIA	1986	1987	1988	1989	1990	1991	1992
RESERVES: NET CHNG IN HLDGS (3)	928	-876	451	-466	-2100	-2060	-2340
SHORT TERM CAPITAL	1300	970	408	-98	-229	214	137
LONG TERM CAPITAL	2358	2213	1333	2510	3724	4440	4044
PORTFOLIO INVESTMENT	268	-88	-98	-173	-93	-12	-88
NET DIRECT INVESTMENT	258	385	576	682	1090	1480	1770
CAPITAL ACCOUNT BALANCE	4180	3480	2220	2920	4500	6130	5860
NET ERRORS AND OMISSIONS	-1270	-753	-933	-1320	744	-517	-115

Sources: IMF, International Financial Statistics
IMF, Balance of Payments Statistics
The World Bank

Notes: (1) An increase in the index is an apreciation of the RER
(2) Computed at current prices.
(3) A negative number means an increase in reserves

TABLE 5

A : MACROECONOMIC INDICATORS

KOREA	1986	1987	1988	1989	1990	1991	1992
AVERAGE INFLATION (%)	2.75	3.05	7.15	5.70	8.58	9.65	6.24
REAL EFFECTIVE EXCH. RATE ('85=100) (1)	104.45	112.33	130.12	142.81	142.02	150.03	148.81
RESERVE MONEY (L.c. $ MILLIONS)	5017000	7469000	9728000	12619000	13811000	16322000	18107000
- NET DOMESTIC CREDIT	3540010	5089820	1298590	2493580	3053200	5684600	4496400
- NET FOREIGN ASSETS	1476990	2379180	8429410	10325420	10757800	10637400	13610600
INVESTMENT (%GDP) (2)	28.35%	29.46%	30.64%	33.35%	36.95%	39.03%	35.87%
NATIONAL SAVINGS (% GDP) (2)	30.95%	34.42%	36.95%	34.76%	35.48%	35.93%	34.48%
- PRIVATE CONSUMPTION (% GDP) (2)	55.97%	53.48%	51.94%	53.86%	53.20%	52.67%	53.40%
- GOVERNT CONSUMPTION (% GDP) (2)	10.06%	9.88%	9.76%	10.53%	10.61%	10.67%	11.35%
CURRENT ACCOUNT DEFICIT (% GDP) (2)	-2.60%	-4.96%	-6.30%	-1.41%	1.47%	3.09%	1.40%

B: BALANCE OF PAYMENTS SELECTED DATA
(in millions of dollars)

KOREA	1986	1987	1988	1989	1990	1991	1992
RESERVES: NET CHNG IN HLDGS (3)	-165	-2260	-3680	-2870	421	1090	-3420
SHORT TERM CAPITAL	-1419	-462	-840	1280	3625	756	-371
LONG TERM CAPITAL	-3202	-8785	-3642	-4332	-1370	3186	2278
PORTFOLIO INVESTMENT	301	-113	-482	-29	811	3120	5740
NET DIRECT INVESTMENT	325	418	720	453	-105	-240	-500
CAPITAL ACCOUNT BALANCE	-3990	-8930	-4250	-2630	2970	6830	7150
NET ERRORS AND OMISSIONS	-547	1180	-591	690	-2010	753	1100

Sources: IMF, International Financial Statistics
IMF, Balance of Payments Statistics

Notes: (1) An increase in the index is an apreciation of the RER.
(2) Computed at current prices.
(3) A negative number means an increase in reserves.

TABLE 6

A : MACROECONOMIC INDICATORS

MALAYSIA	1986	1987	1988	1989	1990	1991	1992
AVERAGE INFLATION (%)	0.74	0.29	2.56	2.81	2.62	4.36	4.77
REAL EFFECTIVE EXCH. RATE ('85=100) (1)	83.94	79.58	72.16	70.87	68.01	66.09	70.26
RESERVE MONEY (L.c. $ MILLIONS)	10134	10664	11894	14783	18145	20771	22150
- NET DOMESTIC CREDIT	-6191	-8769	-6435	-6866	-8875	-9677	-32593
- NET FOREIGN ASSETS	16325	19433	18330	21650	27020	30447	54743
INVESTMENT (%GDP) (2)	25.99%	23.18%	25.96%	29.09%	32.08%	36.33%	33.83%
NATIONAL SAVINGS (% GDP) (2)	25.40%	31.09%	30.73%	28.74%	28.19%	28.01%	30.90%
- PRIVATE CONSUMPTION (% GDP) (2)	50.98%	47.33%	49.37%	51.09%	53.42%	54.69%	51.57%
- GOVERNT CONSUMPTION (% GDP) (2)	16.94%	15.37%	14.30%	14.40%	14.01%	14.20%	13.51%
CURRENT ACCOUNT DEFICIT (% GDP) (2)	0.58%	-7.91%	-4.78%	0.35%	3.89%	8.31%	2.93%

B: BALANCE OF PAYMENTS SELECTED DATA
(in millions of dollars)

MALAYSIA	1986	1987	1988	1989	1990	1991	1992
RESERVES: NET CHNG IN HLDGS (3)	-1140	-1470	1070	-1260	-1990	-1170	-6890
SHORT TERM CAPITAL	-10.8	-969.1	-1140.9	556.8	230.52	610.55	3078.75
LONG TERM CAPITAL	600.75	-1107.22	-1496	-569.5	-58	642	243
PORTFOLIO INVESTMENT	29.8	140	-448	-107	-255	170	-1110
NET DIRECT INVESTMENT	439	423	719	1670	2330	4070	4120
CAPITAL ACCOUNT BALANCE	1110	-1520	-2360	1550	2250	5500	6330
NET ERRORS AND OMISSIONS	476	20	96.7	-101	1330	270	2010

Sources: IMF, International Financial Statistics
IMF, Balance of Payments Statistics
The World Bank

Notes: (1) An increase in the index is an apreciation of the RER.
(2) Computed at current prices.
(3) A negative number means an increase in reserves.

TABLE 7

A : MACROECONOMIC INDICATORS

MEXICO	1986	1987	1988	1989	1990	1991	1992
AVERAGE INFLATION (%)	86.23	131.83	114.16	20.01	26.65	22.66	15.51
REAL EFFECTIVE EXCH. RATE ('85=100) (1)	80.53	80.71	100.76	106.43	113.89	129.94	145.48
RESERVE MONEY (L.c. $ MILLIONS)	8444	14402	20874	23012	31135	39797	45536
- NET DOMESTIC CREDIT	5946	-4693	16813	19011	20182	5246	4370
- NET FOREIGN ASSETS	2498	18895	4061	4001	10953	34551	41166
INVESTMENT (%GDP) (2)	18.54%	19.26%	20.41%	21.41%	21.89%	22.36%	23.30%
NATIONAL SAVINGS (% GDP) (2)	18.00%	21.60%	18.80%	18.30%	19.00%	17.60%	16.30%
- PRIVATE CONSUMPTION (% GDP) (2)	68.45%	65.84%	69.41%	70.31%	70.86%	71.69%	72.20%
- GOVERNT CONSUMPTION (% GDP) (2)	9.10%	8.79%	8.64%	8.45%	8.42%	9.01%	10.10%
CURRENT ACCOUNT DEFICIT (% GDP) (2)	0.54%	-2.34%	1.61%	3.11%	2.89%	4.76%	7.00%

B: BALANCE OF PAYMENTS SELECTED DATA
(in millions of dollars)

MEXICO	1986	1987	1988	1989	1990	1991	1992
RESERVES: NET CHNG IN HLDGS (3)	232	-5680	6790	-121	-2020	-7620	-1930
SHORT TERM CAPITAL	694	-5049	-678	-936	2845	3413	6235
LONG TERM CAPITAL	-272	1193	-4950	-1194	8410	6917	730
PORTFOLIO INVESTMENT	-816	-397	1680	438	-5360	9270	14100
NET DIRECT INVESTMENT	1520	3250	2590	3040	2630	4760	5370
CAPITAL ACCOUNT BALANCE	1130	-1000	-1360	1350	8530	24400	26400
NET ERRORS AND OMISSIONS	458	2610	-2840	2790	890	-2580	-1860

Sources: IMF, International Financial Statistics
IMF, Balance of Payments Statistics
Latin American Consensus Forecasts
The World Bank
Data is not official.

Notes: (1) An increase in the index is an apreciation of the RER
(2) Computed at current prices.
(3) A negative number means an increase in reserves.

TABLE 8

A : MACROECONOMIC INDICATORS

PHILIPPINES	1986	1987	1988	1989	1990	1991	1992
AVERAGE INFLATION (%)	0.75	3.79	8.76	12.21	14.14	18.71	8.92
REAL EFFECTIVE EXCH. RATE ('85=100) (1)	78.03	71.8	69.83	74.93	72.9	71.98	79.87
RESERVE MONEY (L.c. $ MILLIONS)	52130	59420	69100	96000	112980	135680	144840
- NET DOMESTIC CREDIT	185416	191671	190681	204236	253526	204229	152610
- NET FOREIGN ASSETS	-133286	-132251	-121581	-108236	-140546	-68549	-7770
INVESTMENT (%GDP) (2)	15.99%	17.96%	18.37%	21.85%	24.86%	20.93%	22.62%
NATIONAL SAVINGS (% GDP) (2)	17.02%	19.58%	20.51%	19.37%	18.62%	17.34%	16.61%
- PRIVATE CONSUMPTION (% GDP) (2)	72.96%	70.32%	69.58%	70.18%	71.70%	73.84%	76.08%
- GOVERNT CONSUMPTION (% GDP) (2)	7.95%	8.36%	8.99%	9.23%	10.17%	10.24%	9.70%
CURRENT ACCOUNT DEFICIT (% GDP) (2)	-1.02%	-1.62%	-2.14%	2.48%	6.24%	3.59%	6.00%

B: BALANCE OF PAYMENTS SELECTED DATA
(in millions of dollars)

PHILIPPINES	1986	1987	1988	1989	1990	1991	1992
RESERVES: NET CHNG IN HLDGS (3)	-1340	-144	-1010	-462	-167	-2080	-1640
SHORT TERM CAPITAL	-1069	-246	-34	-70	350	1039	1487
LONG TERM CAPITAL	1073	238	-381	581	1227	1238	1360
PORTFOLIO INVESTMENT	13	19	50	280	-50	110	40
NET DIRECT INVESTMENT	127	307	936	563	530	544	228
CAPITAL ACCOUNT BALANCE	146	318	571	1350	2060	2930	3120
NET ERRORS AND OMISSIONS	33.7	67.9	493	402	593	-138	-510

Sources: IMF, International Financial Statistics
IMF, Balance of Payments Statistics

Notes: (1) An increase in the index is an apreciation of the RER
(2) Computed at current prices.
(3) A negative number means an increase in reserves.

TABLE 9

A : MACROECONOMIC INDICATORS

THAILAND	1986	1987	1988	1989	1990	1991	1992
AVERAGE INFLATION (%)	1.84	2.47	3.86	5.36	5.93	5.70	4.14
REAL EFFECTIVE EXCH. RATE ('85=100) (1)	108.48	110.14	111.50	110.52	113.67	120.56	124.75
RESERVE MONEY (L.c. S MILLIONS)	95328	116653	133994	156670	185790	210451	248044
- NET DOMESTIC CREDIT	24684	10529	-28613	-105918	-174717	-254562	-290889
- NET FOREIGN ASSETS	70644	106124	162607	262588	360507	465013	538933
INVESTMENT (%GDP) (2)	21.79%	23.92%	28.84%	31 51%	36.76%	38.86%	37.94%
NATIONAL SAVINGS (% ODP) (2)	20.33%	23.04%	28.19%	29.77%	29.99%	30.18%	32 62%
- PRIVATE CONSUMPTION (% GDP) (2)	64.42%	63.41%	59,77%	59.07%	59,20%	57 40%	57.66%
- GOVERN'T CONSUMPTION (% GDP) (2)	13.20%	11.76%	10.40%	9,85%	9,78%	9.85%	9.70%
CURRENT ACCOUNT DEFICIT (% GDP) (2)	1.46%	0.88%	0.64%	1.75%	0.77%	8.68%	5.32%

B: BALANCE OF PAYMENTS SELECTED DATA
(In millions of dollars)

THAILAND	1986	1987	1988	1989	1990	1991	1992
RESERVES: NET CHNG IN HLDGS (3)	-952	-1280	-2520	-4870	-3560	-4700	-2740
SHORT TERM CAPITAL	-219	461.3	2499	2328.1	5495.9	6661	5385
LONG TERM CAPITAL	-144	72	-268.45	1059	1330	3327	1515
PORTFOLIO INVESTMENT	-29.5	346	530	1490	-38.1	-81.1	750
NET DIRECT INVESTMENT	261.94	182	1085,9	1730,3	2300	1843	1984
CAPITAL ACCOUNT BALANCE	-131	1060	3840	6600	9100	11800	9630
NET ERRORS AND OMISSIONS	598	248	411	928	1420	425	-23.2

Sources: IMF, International Financial Statistics
IMF, Balance of Payments Statistics
The World Bank

Notes: (1) An increase in the index is an apreciation of the RER
(2) Computed at current prices.
(3) A negative number means an increase in reserves.

TABLE 10: MAJOR ECONOMIC MEASURES USED BY THE COUNTRIES IN THE SAMPLE

	MOVE TOWARDS A MORE FLOATING EXCH. RATE (widening of the band, limiting the use of swap facilities, pegging to a basket of currencies, etc.)	FISCAL RESTRAINT (inclusive of paying public foreign debt)	STERILIZATION THROUGH OPEN MARKET OPERATIONS	STERILIZATION THROUGH OTHER MECHANISMS (increase in banks' reserves, increase in banks' capitalization rate, etc.)	RESTRICTIONS ON CAPITAL INFLOWS (taxes to capital inflows, minimum reserve requirements on foreign loans, ceilings on foreign borrowing, etc.)	LIBERALIZATION OF THE CURRENT ACCOUNT (tariff reduction, etc.)	CAPITAL OUTFLOW LIBERALIZATION
ARGENTINA		YES				YES	
CHILE	YES		YES		YES	YES	YES
COLOMBIA			YES	YES*		YES	YES
INDONESIA	YES	YES		YES	YES	YES	
KOREA		YES	YES		YES		
MALAYSIA		YES	YES	YES		YES	
MEXICO	YES	YES	YES		YES	YES	
PHILIPPINES		YES	YES	YES		YES	YES
THAILAND	YES	YES	YES	YES	YES	YES	YES

* Only Temporary

TABLE 11

ARGENTINA	1986	1987	1988	1989	1990	1991	1992
OVERALL CAPITAL ACCOUNT BALANCE							
- In Millions of US Dollars	1852	2064	1672	-775	-1346	4582	11782
- % of GDP	1.75%	1.90%	1.32%	-1.01%	-0.95%	2.41%	5.15%
GOVERNT CONSUMPTION (% GDP)	n.a	4.90%	4.30%	4.50%	8.40%	8.80%	9.40%
AVERAGE INFLATION (%)	90.10	131.33	342.95	3079.42	2313.97	171.67	24.90
REAL EFFECTIVE EXCH. RATE ('85=100)	121.88	123.29	121.47	81.44	135.86	222.15	260.97
CURRENT ACCOUNT DEFICIT (% GDP)	n.a	3.85%	0.74%	1.91%	-1.50%	1.44%	3.65%

CHILE	1986	1987	1988	1989	1990	1991	1992
OVERALL CAPITAL ACCOUNT BALANCE							
- In Millions of US Dollars	940	942.9	991	1338.7	2924	1105	3127
- % of GDP	5.03%	5.39%	4.52%	5.86%	11.62%	3.80%	8.72%
GOVERNT CONSUMPTION (% GDP)	12.58%	10.88%	10.36%	9.60%	9.60%	9.69%	9.73%
AVERAGE INFLATION (%)	19.48	19.87	14.69	17.03	26.04	21.78	15.43
REAL EFFECTIVE EXCH. RATE ('85=100)	84.52	78.43	73.35	75.01	72.84	75.15	79.5
CURRENT ACCOUNT DEFICIT (% GDP)	7.34%	4.99%	0.50%	1.85%	2.32%	-0.17%	1.73%

COLOMBIA	1986	1987	1988	1989	1990	1991	1992
OVERALL CAPITAL ACCOUNT BALANCE							
- In Millions of US Dollars	743	60	409	515	-58	-644	n.a.
- % of GDP	2.13%	0.18%	1.05%	1.30%	-0.14%	-1.54%	n.a
GOVERNT CONSUMPTION (% GDP)	9.81%	9.84%	10.08%	10.55%	10.73%	10.63%	10.39%
AVERAGE INFLATION (%)	18.88	23.3	28.11	25.84	29.14	30.39	27.03
REAL EFFECTIVE EXCH. RATE ('85=100)	74.51	66.44	64.08	61.73	54.46	56.27	61.46
CURRENT ACCOUNT DEFICIT (% GDP)	-2.40%	0.83%	1.70%	0.88%	-0.33%	-3.12%	1.95%

INDONESIA	1986	1987	1988	1989	1990	1991	1992
OVERALL CAPITAL ACCOUNT BALANCE							
- In Millions of US Dollars	2010	2727	1287	1600	5244	5613	5745
- % of GDP	4.64%	3.60%	1.57%	1.72%	5.06%	4.93%	4.57%
GOVERNT CONSUMPTION (% GDP)	11.03%	9.42%	8.98%	9.39%	8.92%	9.18%	9.64%
AVERAGE INFLATION (%)	5.94	9.16	8.04	6.42	7.45	9.40	7.50
REAL EFFECTIVE EXCH. RATE ('85=100)	74.79	79.08	78.31	76.51	75.02	78.08	80.59
CURRENT ACCOUNT DEFICIT (% GDP)	5.08%	3.29%	2.41%	2.49%	4.37%	4.07%	2.07%

KOREA	1986	1987	1988	1989	1990	1991	1992
OVERALL CAPITAL ACCOUNT BALANCE							
- In Millions of US Dollars	-4537	-7750	-4841	-1940	960	7583	8250
- % of GDP	-4.28%	-5.91%	-2.76%	-0.91%	0.39%	2.67%	2.78%
GOVERNT CONSUMPTION (% GDP)	10.06%	9.88%	9.76%	10.53%	10.61%	10.67%	11.35%
AVERAGE INFLATION (%)	2.75	3.05	7.15	5.7	8.58	9.65	6.24
REAL EFFECTIVE EXCH. RATE ('85=100)	104.45	112.33	130.12	142.81	142.02	150 03	148.81
CURRENT ACCOUNT DEFICIT (% GDP)	-2.60%	-4.96%	-6.30%	-1.41%	1.47%	3.09%	1.40%

MALAYSIA	1986	1987	1988	1989	1990	1991	1992
OVERALL CAPITAL ACCOUNT BALANCE							
- In Millions of US Dollars	1586	-1500	-2263.3	1449	3580	5770	8340
- % of GDP	5.71%	-4.75%	-6.52%	3.81%	8.36%	12.21%	14.47%
GOVERNT CONSUMPTION (% GDP)	16.94%	15.37%	14.30%	14 40%	14.01%	14.20%	13.51%
AVERAGE INFLATION (%)	0.74	0.29	2.56	2.81	2.62	4.36	4.77
REAL EFFECTIVE EXCH. RATE ('85=100)	83.94	79.58	72.16	70.87	68.01	66 09	70.26
CURRENT ACCOUNT DEFICIT (% GDP)	0.58%	-7.91%	-4.78%	0.35%	3.89%	8.31%	2.93%

TABLE 11 (continued)

MEXICO	1986	1987	1988	1989	1990	1991	1992
OVERALL CAPITAL ACCOUNT BALANCE							
- In Millions of US Dollars	1588	1610	-4200	4140	9420	21820	24540
- % of GDP	1.23%	1.15%	-2.44%	2.00%	3.86%	7.62%	7.36%
GOVERN'T CONSUMPTION (% GDP)	9.10%	8.79%	8.64%	8.45%	8.42%	9.01%	10.10%
AVERAGE INFLATION (%)	86.23	131.83	114.16	20.01	26.65	22.66	15.51
REAL EFFECTIVE EXCH. RATE ('85=100)	80.53	80.71	100.76	106.43	113.89	129.94	145.48
CURRENT ACCOUNT DEFICIT (% GDP)	0.54%	-2.34%	1.61%	3.11%	2.89%	4.76%	7.00%

PHILIPPINES	1986	1987	1988	1989	1990	1991	1992
OVERALL CAPITAL ACCOUNT BALANCE							
- In Millions of US Dollars	180	386	1064	1752	2653	2792	2610
- % of GDP	0.60%	1.16%	2.80%	4.12%	6.03%	6.19%	4.97%
GOVERN'T CONSUMPTION (% GDP)	7.95%	8.36%	8.99%	9.23%	10.17%	10.24%	9.70%
AVERAGE INFLATION (%)	0.75	3.79	8.76	12.21	14.14	18.71	8.92
REAL EFFECTIVE EXCH. RATE ('85=100)	78.03	71.80	69.83	74.93	72.90	71.98	79.87
CURRENT ACCOUNT DEFICIT (% GDP)	-1.02%	-1.62%	-2.14%	2.48%	6.24%	3.59%	6.00%

THAILAND	1986	1987	1988	1989	1990	1991	1992
OVERALL CAPITAL ACCOUNT BALANCE							
- In Millions of US Dollars	467	1308	4251	7528	10520	12225	9607
- % of GDP	1.12%	2.69%	7.12%	10.87%	13.13%	13.10%	9.15%
GOVERN'T CONSUMPTION (% GDP)	13.20%	11.76%	10.40%	9.85%	9.78%	9.85%	9.70%
AVERAGE INFLATION (%)	1.84	2.47	3.86	5.36	5.93	5.70	4.14
REAL EFFECTIVE EXCH. RATE ('85=100)	108.48	110.14	111.50	110.52	113.67	120.56	124.75
CURRENT ACCOUNT DEFICIT (% GDP)	1.46%	0.88%	0.64%	1.75%	6.77%	8.68%	5.32%

TABLE 12

Average Capital Inflows 1989-1992 (% of GDP)		Trend in Government Consumption (change in percentage points of GDP 1986-92)		Change in the Real Exchange Rate Index (in % 1989-92) [1]	
Thailand:	11.6%	Decreasing:	-3.5	+	13%
Malaysia:	9.7%	Decreasing:	-3.4	-	1%
Chile:	7.5%	Decreasing:	-2.9	+	6%
Philippines:	5.3%	Increasing:	+1.8	+	14% [5]
Mexico:	5.2%	Increasing:	+1.0	+	37%
Indonesia:	4.1%	Decreasing:	-1.4	+	5%
Argentina:	1.4%	Increasing:	+4.5 [2]	+	96% [3]
Korea:	1.2%	Increasing:	+1.3	+	14% [4]

Notes:
(1) A positive number means an appreciating RER.
(2) 1987-92
(3) 1990-92, Bilateral REER (CPI)
(4),(5) 1988-92

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